

**BY ORDER OF THE COMMANDER
AIR FORCE MATERIEL COMMAND**



**AIR FORCE INSTRUCTION 21-101
AIR FORCE MATERIEL COMMAND
Supplement
AIR FORCE MATERIEL
COMMAND_ADDENDUM_A
15 AUGUST 2016**

Maintenance

**NON STANDARD ORGANIZATION
(NSO) LOGISTICS MAINTENANCE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFI 21-101, *Aircraft and Equipment Maintenance Management*. This publication does not apply to the Air National Guard Bureau (ANG) and the Air Force Reserve Command (AFRC) and their units. However, if an AFRC unit is assigned or associated with AFMC where AFMC is the lead, this guidance would be applicable to the AFRC unit. This publication is one of the Air Force directives for maintenance management and provides the minimum basic logistics/maintenance-related program requirements for AFMC NSOs. NSOs are organizations where their logistics/maintenance support missions are not organized under the standard AFI 21-101 Combat Wing Organization (CWO) concept in accordance with (IAW) AFI 38-101, *Air Force Organization*, and require supplemental guidance. It applies to all personnel who: Perform, plan, schedule, evaluate, supervise or control maintenance of research, manufacturing, test, development, and integration laboratories and work centers. Deviation to provide/scope applicability for logistics/maintenance NSOs in an Addendum(s) to the MAJCOM supplement has been approved by AF/A4L IAW AFI 21-101. NSOs are not required to follow AFI 21-101 or AFI 21-101 AFMC Sup, they follow this instruction (Addendum). Note: The Addendum scopes the NSOs requirements in meeting the intent of the AFI and AFMC Sup based on their mission. Ensure that all records created as a result of processes prescribed in this

publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). This publication may be supplemented at any level, but all direct Supplements must be routed to the Office of Primary Responsibility (OPR) of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-2 and T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Submit recommendations for change or improvement to this instruction on Air Force (AF) Form 847, Recommendation for Change of Publication in accordance with AFI 33-360. For questions on interpreting this instruction, first contact your Quality Assurance (QA) Office/activity. Send questions to the Office of Primary Responsibility (OPR) at AFMC/A4 Workflow AFMC.A4M.Workflow@us.af.mil, 4375 Chidlaw Rd, Bldg 262 Room C114 WPAFB OH 45433-5006. The term NSO refers to the following organizations which are identified in the NSO applicability matrices below and in Tables 1.1 through 1.5. Air Force Life Cycle Management Center (AFLCMC) units: 66th Air Base Group (ABG), 88th Air Base Wing (ABW), Cryptologic and Cyber Systems Division (HNC) (specifically the Technical Application Products, Consolidated Signals Intelligence Support Activity Integration Center, and Space COMSEC Maintenance mission areas), 645 Aeronautical Systems Group (AESG), Armament Sustainment Division (ASD); Air Force Research Laboratory (AFRL), all units; Air Force Test Center (AFTC) units: Arnold Engineering and Development Complex (AEDC), 96th Test Group (TG) and Plant 42; and Air Force Sustainment Center (AFSC) units: 72nd ABW, 72nd Logistics Readiness Squadron (LRS)/LGRMW, 75 ABW, 649 MUNS, 78 ABW, 78 LRS/LGRW. Organizations that implement processes that were not identified as applicable in this Addendum or gain those functions will follow the guidance in AFI 21-101 and AFI 21-101 AFMC Sup or submit a deviation in the form of a waiver request.

SUMMARY OF CHANGES

This publication has been substantially revised to meet the intent of AFI 21-101 dated 21 May 2015 and the AFMC Supplement for AFMC NSOs; this Addendum must be reviewed in its entirety. This revision clarifies Quality Assurance (QA) training, QA Evaluator Personnel Evaluation (EPE) requirements, egress maintenance training, impoundment procedures, special certification documentation, updated contract surveillance guidance with MP5301.602-2(d) effective as of 1 Oct 2015, added Ground Instructional Trainer Aircraft (GITA)/Training Aid Aircraft (TAA) guidance, and added Transient Alert/Aircraft (TA) guidance. Additionally, IAW AFI 33-360 dated 1 December 2015, MAJCOM level instruction will not Tier references above the MAJCOM waiver authority (e.g. Table 1.1. Tier Waiver Authorities, Tier T-1 may be used in publications at Departmental level only.). All of the applicable Air Force Nuclear Weapons Center NSOs (377 ABW, 377 MXG, 377 MXS, 898 MUNS, and OL-RAM) were removed from this Addendum due to being transferred from AFMC to Air Force Global Strike Command. Also, designated and added AFLCMC Armament Sustainment Division as an NSO.

Chapter 1

MANAGEMENT PHILOSOPHY AND APPLICABILITY

1.1. Overview. The NSO applicability to AFI 21-101 and AFI 21-101 AFMC Supplement 1 is subjective; therefore, this instruction prescribes the basic programs to be used in NSOs (i.e., list of requirements) and provides senior management, middle management, maintenance supervisors, researchers, engineers, scientists, and technician's direction for accomplishment of logistics/maintenance management. The affected NSOs have distinct mission areas requiring development of separate guidance. The NSOs are expected to effectively use the resources assigned to ensure mission accomplishment. NSOs are required to establish guidance and may use additional management procedures not specifically prohibited by this instruction, any technical order, or other applicable instruction. Supervisors at all levels are responsible to ensure this directive is fully implemented. In the event of a conflict between this instruction and Technical Orders (TOs), TOs will take precedence.

Table 1.1. AFLCMC Applicability.

	66ABG	88ABW	HNC	ASD	645 AESG
1.1. Overview	Y	Y	Y	Y	Y
2. Compliance Terminology	Y	Y	Y	Y	Y
3. Waivers	Y	Y	Y	Y	Y
4. Policy Development	Y	Y	Y	Y	Y
5.1. Logistics/Maintenance Program Responsibilities	Y	Y	Y	Y	Y
5.2. Special Certification (SC) Documentation	Y	Y	Y	Y	Y
5.3. Equipment Maintenance	Y	Y	Y	Y	
5.4. Electro-Static Discharge (ESD) Program		Y	Y	Y	
5.5. Explosive Safety and Security of Explosives	Y	Y		Y	
5.6. Safety	Y	Y	Y	Y	Y
5.7. Tool and Equipment Management	Y	Y	Y	Y	Y*
5.8. Foreign Object Damage (FOD) Prevention Program	Y	Y	Y	Y	Y
5.9. Impoundment Procedures	Y	Y	Y		Y
5.10. In-Progress Inspection (IPI)	Y	Y			Y
5.11. Forms	Y	Y	Y	Y	
5.12. Dropped Object Prevention (DOP) Program	Y	Y			Y
5.13. Scheduling					
5.14. Engine Borescope Training and Certification Program					
5.15. Engine Management					
5.16. Ground Instructional Trainer Aircraft					
6. Quality Assurance	Y		Y		Y
6.2. AFMC Conventional Munitions Program	Y	Y		Y	
7. Technical Data	Y	Y	Y	Y	Y
8. Maintenance Information System (MIS)	Y	Y	Y	Y	
9. Maintenance Metrics	Y	Y	Y		
10. Supply Support	Y	Y	Y	Y	
11. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program	Y	Y			
12. Modification Management		Y	Y	Y	
13. Egress Maintenance					
13.2. Classification Training					
14. Contract Surveillance		Y			Y
15. Transient Aircraft (Alert) (TA)	**	Y			
(*) NOTE: 645 AESG Tool Accountability is limited to para. 5.7.15.					
(**) NOTE: For the 66 ABG, see para 15.1. for exceptions.					

[illegible]

Table 1.3. AFRL Applicability.

	AFRL
1.1. Overview	Y
2. Compliance Terminology	Y
3. Waivers	Y
4. Policy Development	Y
5.1. Logistics/Maintenance Program Responsibilities	Y
5.2. Special Certification (SC) Documentation	Y
5.3. Equipment Maintenance	Y
5.4. Electro-Static Discharge (ESD) Program	Y
5.5. Explosive Safety and Security of Explosives	Y
5.6. Safety	Y
5.7. Tool and Equipment Management	Y
5.8. Foreign Object Damage (FOD) Prevention Program	Y
5.9. Impoundment Procedures	*
5.10. In-Progress Inspection (IPI)	
5.11. Forms	Y
5.12. Dropped Object Prevention (DOP) Program	
5.13. Scheduling	
5.14. Engine Borescope Training and Certification Program	
5.15. Engine Management	**
5.16. Ground Instructional Trainer Aircraft	Y
6. Quality Assurance	Y
6.2. AFMC Conventional Munitions Program	Y
7. Technical Data	Y
8. Maintenance Information System (MIS)	
9. Maintenance Metrics	
10. Supply Support	Y
11. Crash Damaged or Disabled Aircraft Recovery (CDDAR) Program	
12. Modification Management	
13. Egress Maintenance	
13.2. Classification Training	
14. Contract Surveillance	Y
15. Transient Aircraft (Alert) (TA)	
<p>* - All AFRL research test activity is subject to an AFRL supplement to AFI 91-202, The US Air Force Mishap prevention program, AFRLI 61-103, AFRL Research Test Management and AFI 91-204, Safety Investigations and Reports.</p> <p>** - Only applicable when engines assigned, will follow this guidance para 5.15.</p>	

Table 1.4. AFTC Applicability

	AEDC	96TG	Plant 42
1.1. Overview	Y	Y	Y
2. Compliance Terminology	Y	Y	Y
3. Waivers	Y	Y	Y
4. Policy Development	Y	Y	Y
5.1. Logistics/Maintenance Program Responsibilities	Y	Y	
5.2. Special Certification (SC) Documentation	Y	Y	
5.3. Equipment Maintenance	Y	Y	Y
5.4. Electro-Static Discharge (ESD) Program	Y	Y	
5.5. Explosive Safety and Security of Explosives	Y	Y	Y
5.6. Safety	Y	Y	Y
5.7. Tool and Equipment Management	Y	Y	
5.8. Foreign Object Damage (FOD) Prevention Program	Y	Y	Y
5.9. Impoundment Procedures	Y	Y	
5.10. In-Progress Inspection (IPI)		Y	
5.11. Forms	Y	Y	
5.12. Dropped Object Prevention (DOP) Program		Y	
5.13. Scheduling		Y	
5.14. Engine Borescope Training and Certification			
5.15. Engine Management	Y		
5.16. Ground Instructional Trainer Aircraft			
6. Quality Assurance		Y	
6.2. AFMC Conventional Munitions Program	Y	Y	
7. Technical Data	Y	Y	
8. Maintenance Information System (MIS)	Y	Y	
9. Maintenance Metrics		Y	
10. Supply Support		Y	
11. Crash Damaged or Disabled Aircraft Recovery			Y
12. Modification Management		Y	
13. Egress Maintenance		Y	
13.2. Classification Training		Y	
14. Contract Surveillance	Y	Y	
15. Transient Aircraft (Alert) (TA)			

Chapter 2

COMPLIANCE TERMINOLOGY

2.1. For the purpose of this instruction, the following definitions apply:

- 2.1.1. *Shall, Must, Will* - Indicate mandatory requirements.
- 2.1.2. *Should* - Indicates a preferred method of accomplishment.
- 2.1.3. *May* - Indicates an acceptable or suggested means of accomplishment.

Chapter 3

WAIVERS

3.1. Any policy waivers to this addendum shall be processed IAW higher headquarters directives. Waiver requests will be submitted IAW AFI 33-360. AFI 33-360 waiver authority tiers do not apply to TO waivers/deviations, see TO 00-5-1, *AF Technical Order System*.

Chapter 4

POLICY DEVELOPMENT

4.1. At a minimum, the affected NSOs will: Publish specific policy guidance (e.g. Supplement/Operating Instruction(s) (OI(s)) in the appropriate publication series as required for the programs outlined in this instruction and publish an applicability matrix for subordinate units not addressed in **Tables 1.1 - 1.6 (T-2)**

Chapter 5

LOGISTICS/MAINTENANCE PROGRAMS

5.1. Logistics/Maintenance Program Responsibilities. Establish written policy if responsibilities differ from a standard organizational structure. Indicate the responsibilities for key leaders involved in their logistics/maintenance activities. Due to diversity of organizational structures, responsibilities are assigned at the appropriate level as applicable. NSO policy, at a minimum if applicable, will detail responsibilities for the following positions or their applicable equivalents: **(T-2)**

5.1.1. Wing Commanders CC/CL or Directors. **(T-2)**

5.1.2. Commanders/Detachment Commanders. **(T-2)**

5.1.3. Deputy Commanders/Deputy Detachment Commanders. **(T-2)**

5.1.4. Logistics Managers. **(T-2)**

5.1.5. Squadron Commanders/Director of Operations. **(T-2)**

5.1.6. Division Chiefs, Branch Chiefs, Flight Chiefs, Section Chiefs, and Work Center Supervisors/Leads. **(T-2)**

5.2. Special Certification (SC) Documentation. NSOs will establish SC documentation to identify personnel authorized to perform the special certification requirements. The MXG/CC or equivalent are not required to be on the SCR/SC by virtue of their position as the SC approval authority. The SC documentation will identify personnel authorized to: **(T-2)**

5.2.1. Clear Red X conditions (i.e., aircraft/support equipment, egress, etc.). Identify systems or Air Force Specialty Code (or equivalent) in which authorized to clear Red X conditions. Approved by GP/CC or equivalent (HNC – Branch Chief, AFRL –Division Chief). **(T-2)**

5.2.2. Sign Test Measurement and Diagnostic Equipment (TMDE) limited certification labels. Lowest level of approval by FLT/CC or Chief/equivalent. **(T-2)**

5.2.3. Initiate/release equipment from impoundment. Approved by GP/CC or equivalent (HNC – Branch Chief, AFRL –Division Chief)(AEDC - TSS Division Chief/TSS Deputy). **(T-2)**

5.2.4. Downgrade Red X. Approved by GP/CC or equivalent (HNC – Branch Chief, AFRL – Division Chief). **(T-2) GP/CC**

5.2.5. Administrate Cannibalization (CANN) authority. Approved by GP/CC or equivalent (HNC – Branch Chief, AFRL –Division Chief). **(T-2)**

5.2.6. Clear In-Process Inspection (IPI) by primary Air Force Specialty Code (AFSC) and Mission Design Series (MDS). Approved by SQ/CC or equivalent. **(T-2)**

5.2.7. Clear Red X when a lost tool/item cannot be found. Approved by GP/CC or equivalent (HNC – Branch Chief, AFRL –Division Chief). **(T-2)**

5.3. Equipment Maintenance. Maintenance and calibration of support equipment must meet the requirements of TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures*; AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program*, TO 00-20-14, *Air Force Metrology and Calibration Program*, TO 34-1-3 *Machinery*

and Shop Equipment, equipment specific TOs and owner's manuals, host unit instructions and local supplements.

5.3.1. Maintenance repair priorities are not based on the standard repair priority designators as established in AFI 21-101. Repair priorities will be based on parameters such as customer required delivery dates, stock levels of critical items and other mission requirements. (T-2)

5.3.2. Units must ensure annual inventory of all Aerospace Ground Equipment (AGE) maintained, if applicable, is submitted on template in **Attachment 5** to the HQ AFMC/A4MM AGE Functional Manager at AFMC.A4M.Workflow@us.af.mil by the 15th of April each year. Electronic version of template can be obtained from the HQ AFMC/A4MM AGE Manager. (T-2)

5.3.3. Units must ensure annual transient aircraft landing data, if applicable, is submitted to the HQ AFMC/A4MM AGE functional manager at AFMC.A4M.Workflow@us.af.mil by 1 February of each year. Using the template in **Attachment 6**, the data will reflect previous calendar year's transient aircraft landings by aircraft MDS. Electronic version of template can be obtained from the HQ AFMC/A4MM AGE manager. (T-2)

5.4. Electrostatic Discharge (ESD) Program. NSOs working on items that meet ESD criteria as defined in TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electrical Equipment*, must comply with TO 00-25-234 requirements.

5.5. Explosive Safety and Security of Explosives. NSOs working with, handling or storing explosive items must comply with AFI 31-101, *Integrated Defense*; DoD 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives*; AFMAN 91-201, *Explosives Safety Standards*; AFI 21-200, *Munitions and Missile Maintenance Management*; AFI 21-201, *Munitions Management*, and applicable host unit instructions.

5.6. Safety. NSOs will comply with AFI 91-202, *The US Air Force Mishap Prevention Program*, all applicable 48- and 91-series Air Force Occupational Safety & Health (AFOSH) Standards, and applicable host unit instructions. (T-2)

5.6.1. Ensure contracts contain reference(s) that contractor personnel working on government installations must comply with safety and health requirements in Air Force Federal Acquisition Regulation Supplement (AFFARS) Part 5352.223-9001. For more information, visit <http://farsite.hill.af.mil>.

5.7. Tool and Equipment Management. NSOs will develop procedures for accountability and management of tools and equipment used in the work centers. As a minimum, guidance will address the following: (T-2)

5.7.1. Roles and responsibilities of key personnel involved in managing the tool accountability program. (T-2)

5.7.2. Standardized procedures for security and accountability of tools and equipment. (T-2)

5.7.3. Inventory requirements. As a minimum, Tool Custodians must conduct and document a comprehensive annual inventory of all tools and equipment. (T-2)

5.7.4. Government owned tools warranty program management. (T-2)

5.7.5. Procedures to procure tools using the Blanket Purchasing Agreement (BPA) wherever applicable. (T-2) See AFMC Hand Tools Strategic Sourcing Ordering Guide at: https://org.eis.afmc.af.mil/sites/HQAFMCA4/A4M/Hand_Tools/

5.7.6. Procedures for accountability and management of replacement, expendable, and consumable hand tools, and other items contained in Composite Tool Kit (CTKs) and/or Individual Tool Kits (ITKs). (T-2)

5.7.7. Procedures for transfer of tools contained in CTKs/ITKs at the job site (on-site transfers). CTKs are not normally passed from one individual to another at the job site; however, mission needs occasionally require this action to occur. Ensure tool accountability and control is maintained when transfer occurs between the individuals. (T-2)

5.7.8. Procedures for lost or missing tools to reduce the potential for Foreign Object Damage (FOD) and help create a safe work environment. (T-2)

5.7.9. Procedures to document missing, broken or removed tools/items. NSOs will document missing, broken or removed tools/items on AFMC Form 61, *Missing/Removed Tools and Equipment*. (T-2)

5.7.10. Procedures to assign and control Event Identification Description/Equipment Identification Designator (EIDs) for CTKs/ITKs, equipment, and individual tools. (T-2)

5.7.10.1. All units must permanently mark their tools with the assigned EID. Etching will be the preferred method to mark tools; however, any method that ensures the EID is not easily removed will be sufficient. Small tools (such as drill bits, allen wrenches, apexes, jewelers screwdrivers, etc.) and/or items that cannot be etched will be maintained in a container marked with the EID along with the number of tools it contains and identified as such on the inventory list.

5.7.10.2. For equipment identification marking requirements see AFI 23-101, *Air Force Material Management*, Section 5D-Equipment Management.

5.7.11. Procedures and responsibilities for situations where two or more work centers operate a single tool room/support section, or when work centers elect to distribute CTKs or peculiar support/test equipment to decentralized locations. (T-2)

5.7.12. Procedures for controlled access to tool rooms. (T-2)

5.7.13. Procedures for sign out/sign in inventories of CTKs/ITKs when used. (Daily or weekly) (T-2)

5.7.13.1. Units are authorized to increase the open/close interval to monthly if the annual comprehensive inventory interval is decreased to quarterly. (T-2)

5.7.14. Procedures to train personnel on the tool accountability program requirements. (T-2)

5.7.15. Procedures to control individually issued tools. Individually issued tools will be limited to mini-flashlights, Leatherman type multi-tools and inspection mirrors. Personal tools are not authorized. (T-2)

5.7.16. Procedures to manage spare tools. (T-2)

5.7.17. Procedures to manage locally manufactured, developed, or modified tools and equipment. (T-2)

5.8. Foreign Object Damage (FOD) Prevention Program. FOD is any damage to an aircraft, engine, aircraft system, component, tire, munitions, or Support Equipment (SE) caused by a Foreign Object (FO) which may or may not degrade the required safety and/or operational characteristics of the aforementioned items.

5.8.1. There are two categories of FO areas: critical and non-critical. FO critical areas are areas where aerospace maintenance, testing, and operations are performed (e.g., jet engine maintenance, fuel cell maintenance, major sub-assembly maintenance, and support equipment maintenance). Non-critical FO areas are all other areas not defined previously. NSOs shall identify and document critical/non-critical FO areas. **(T-2)**

5.8.2. HQ AFMC/A4M is the OPR for the AFMC FOD Prevention Program.

5.8.3. NSOs with FO critical areas shall:

5.8.3.1. Appoint a FOD Prevention Program Manager and post their name in a prominent place within each applicable unit on a locally developed visual aid. **(T-2)**

5.8.3.2. Ensure all cut aircraft tires are reported to airfield management upon discovery so they can inspect the taxiway and runway for possible FO. Maintenance will inspect the aircraft taxi route from the parking ramp up to the taxi way for possible FO. **(T-2)**

5.8.3.3. Ensure the organization FOD Prevention Program Manager provides an initial FOD report via e-mail to HQ AFMC/A4M workflow at AFMC.A4M.Workflow@us.af.mil within 24 hours of occurrence. A follow up report will be required every 45 days until closeout. The FOD report format listed in **Attachment 2** shall be followed. **(T-2)**

5.8.3.3.1. In addition, when FOD is discovered on a transient aircraft, the organization FOD Prevention Program Manager shall notify the owning organization within 24 hours. An informational copy of the FOD report must be provided to the owning organization's safety office/FOD monitor to ensure compliance with AFI 91-204, *Safety Investigations and Reports*. Aircrews must ensure proper documentation in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*, or electronic equivalent has been completed IAW TO 00-20-1. **(T-2)**

5.8.3.4. Ensure the organization FOD Prevention Program Manager provides a final report via e-mail to HQ AFMC/A4M at AFMC.A4M.Workflow@us.af.mil within two duty days of completing the FOD investigation and collecting all data. Reports shall be maintained for a minimum of 24 months (may be electronic). The FOD report format listed in **Attachment 2** shall be followed. **(T-2)**

5.8.3.5. Ensure organizations supporting local or transient aircraft provide a completed AFMC Form 40, *Foreign Object Damage Record*, monthly via e-mail to AFMC/A4M workflow. **(T-2)**

5.8.3.6. Develop and implement detailed guidance and procedures to supplement the Command FOD Prevention Program in this addendum. Directives shall outline organizational responsibilities for airfield, runways, taxiways, parking ramps, and outside maintenance areas. As a minimum, the FOD Prevention Program must address the following: **(T-2)**. **Note:** Tenant units may follow a host base's FOD Program as long as the tenant unit's Local OI specifies the requirement to follow the host base's program. The tenant unit is still required to appoint a FOD Program Manager to act as the unit's focal point for FOD related issues and must submit FOD Reports and a monthly AFMC Form 40 IAW the requirements outlined above. **(T-2)**

5.8.3.6.1. All openings, ports, lines, hoses, electrical connections, and ducts on aircraft, engines, munitions, missiles, drones, space systems, support equipment, AGE, trainers, or components shall be capped or plugged to prevent FO from entering these systems IAW applicable technical data. At no time shall items (e.g., aircraft forms binders, checklists, tools, etc.) be placed in or on engine intakes. **(T-2)**. *Note:* Does not apply to technicians performing inlet maintenance, inspections, and blade blending requiring lights, files, or other tools inside aircraft inlets.

5.8.3.6.2. A standardized flightline clothing policy to include addressing the wearing of hats, berets, wigs, hairpieces, badges, passes, etc. aimed at FOD prevention. Climate and safety shall be considered. **(T-2)**

5.8.3.6.3. Elimination of FOs in aircraft prior to flight. **(T-2)**

5.8.3.6.4. Vehicle operators shall stop and perform a visual FOD inspection on all vehicles, vehicle tires, open cargo areas, and towed equipment prior to entering the runway, taxiway, airfield, or other areas as directed by AFI 13-213, *Airfield Driving*, and the organizations FOD Prevention Program.

5.8.3.6.4.1. When inspecting tires, ensure a roll-over check is completed to ensure the entire surface is inspected for FOD including the unseen area in contact with the pavement. **(T-2)**

5.8.3.6.4.2. Vehicle operators departing the paved surface shall perform a FOD inspection on all equipment and vehicle tires immediately upon re-entering the paved surface of runways, taxiways, airfield, and aircraft parking ramps areas. **(T-2)**

5.8.3.6.4.3. A locally manufactured tool for removing debris from tire treads is authorized for use and shall be identified to the vehicle by using the vehicle identification number. **(T-2)**

5.8.3.6.5. All flightline grounding points shall be kept clean of debris and should be a high interest item for FOD walks. **(T-2)**

5.8.3.6.6. Grounding wires shall have two screws securing the cable to the grounding clip. Screws shall be coated with a thread locking compound and covered with Room Temperature Vulcanizing (RTV) sealant to prevent them from backing out. Unused screws shall be removed. **(T-2)**

5.8.3.6.7. FOD walks/sweeps are mandatory within areas designated as FO critical areas. Local OIs shall outline frequency and areas of responsibility for each participating organization. **(T-2)**

5.8.3.6.8. FOD walks shall be accomplished prior to towing aircraft through low potential FO areas to ensure damage does not occur to aircraft tires. **(T-2)**

5.8.3.7. Develop and implement a FOD awareness and prevention training program. At a minimum, the training program must address the following: **(T-2)**

5.8.3.7.1. Standardized training documentation requirements. **(T-2)**

5.8.3.7.2. FOD awareness and prevention practices. **(T-2)**

5.8.3.7.3. Initial FOD training. Supervisors shall ensure newcomers who work in or transit FOD critical areas (other than designated walk areas) are trained on work center specific FOD awareness and prevention practices prior to starting work in their assigned work area. Ensure individuals who are assigned temporary duty (TDY), transferred, or loaned from other units receive work center FOD training prior to beginning work in their area. **(T-2)**

5.8.3.7.4. Annual FOD training. Supervisors shall ensure personnel receive annual FOD awareness and prevention training. (T-2)

5.8.3.8. Investigate each FOD incident to determine the precise cause and ensure positive corrective action is accomplished. FOD incidents are classified as preventable and non-preventable. (T-2)

5.8.3.8.1. FODs are considered preventable except when:

5.8.3.8.1.1. Caused by natural environment or wildlife. This includes hail, ice, animals, insects, sand, and birds. Report this type of damage IAW AFI 91-204.

5.8.3.8.1.2. Caused by internal engine materiel failure, as long as damage is confined to the engine.

5.8.3.8.1.3. Caused by materiel failure of an aircraft/equipment component if the component failure is reported as a Deficiency Report (DR) using the combined mishap DR reporting procedures of AFI 91-204 and TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*.

5.8.3.9. Consult TO 1-1-691, *Cleaning and Corrosion Prevention and Control, Aerospace and Non-Aerospace Equipment*, and aircraft specific TOs for bird strike clean up procedures; and AFMAN 91-223, *Aviation Safety Investigations and Reports*, for bird strike reporting procedures.

5.8.4. NSOs with FO non-critical areas shall:

5.8.4.1. Develop and implement a FOD awareness and prevention training program. Those NSOs that are Tenant organizations may elect to follow Host-Base FO procedures if established. At a minimum, the training program must address the following: (T-2)

5.8.4.1.1. Standardized training documentation requirements. (T-2)

5.8.4.1.2. FOD awareness and prevention practices.

5.9. Impoundment Procedures

5.9.1. Aircraft and Equipment Impoundment. Aircraft or equipment is impounded when intensified management is warranted due to system/component malfunction or failure of a serious/chronic nature. Refer to AFI 91-204 for aircraft and equipment involved in accidents, mishaps or incidents. Impounding aircraft and equipment enables investigative efforts to systematically proceed with minimal risk relative to intentional/unintentional actions and subsequent loss of evidence.

5.9.1.1. Unit personnel will ensure development of a local OI for local impoundment procedures and include the following as a minimum:

5.9.1.1.1. Impoundment Authority: (Flying Mission Units) The NSO Commander/Director will appoint Impoundment Authority personnel on the SC documentation. Non-Flying units can use Sq/CC or equivalent appointments. (T-2)

5.9.1.1.2. The Impoundment Authority will select an Impoundment Official, minimum of a first line supervisor, not directly related to the equipment considered for impoundment. (T-2)

5.9.1.1.3. Impoundment Release Authority will be the individual appointed as the Impoundment Authority. (T-2)

5.9.1.1.4. The isolation area will be determined by the Impoundment Authority.

5.9.2. Applicable units with assigned aircraft or TA (Contracted Transient Aircraft process/procedures may vary based on contract/PWS) will additionally complete the following:

5.9.2.1. Ensure local OI also includes notification, release officials, specific forms entries, appointment and responsibilities of Impoundment Officials, special handling or tagging of parts from impounded items sent through the repair cycle and conducting or transferring impoundment investigations across organizations. (T-2)

5.9.2.1.1. **Mandatory Impoundments.** Aircraft and/or equipment will be impounded:

5.9.2.1.1.1. When the Impoundment Authority determines extraordinary measures are required to address any degradation of aircraft airworthiness or serious aircraft/equipment anomaly. (T-2)

5.9.2.1.1.2. Following an aircraft ground or flight-related mishap as defined in AFI 91-204 and AFMAN 91-223, *Aviation Safety Investigations and Reports*.

5.9.2.1.1.3. When support equipment is known or suspected to have been a factor in a mishap or may have contributed to injuries. (T-2)

5.9.2.1.1.4. Following an uncommanded flight control movement. (T-2)

5.9.2.1.1.5. Following an inadvertent weapons release or explosive mishap IAW AFI 21-204. (T-2)

5.9.2.1.1.6. Following aircraft engine anomalies to include but not limited to:

5.9.2.1.1.6.1. Unselected propeller reversal. (T-2)

5.9.2.1.1.6.2. Flameout/stagnation (for single engine aircraft). (T-2)

5.9.2.1.1.6.3. Unselected power reversal. (T-2)

5.9.2.1.1.6.4. Engine case penetrations, ruptures, or burn-through from an internal engine component. (T-2)

5.9.2.1.1.6.5. When an aircraft experiences a loss of thrust sufficient to prevent maintaining level flight at a safe altitude. (T-2) This includes all cases of multiple engine power loss or roll back.

5.9.2.1.1.6.6. Engine damage due to a foreign object and source of FO is determined to be internal to the engine. (T-2)

5.9.2.1.1.6.7. Engine damage which occurs during transport. (T-2)

5.9.2.1.1.7. Following an in-flight fire. (T-2)

5.9.2.1.1.8. When an aircraft experiences an in-flight loss of all pitot-static system instruments or all gyro stabilized attitude or direction indicators. (T-2)

5.9.2.1.1.9. When there is evidence of intentional damage, tampering, or sabotage. (T-2)

5.9.2.1.1.10. When physiological incidents attributable to aircraft systems or cargo occur. (T-2)

5.9.2.2. Unit TAs will contact the owning MXG/CC for release authority.

5.9.3. Rules of Impoundment Specifically for Weapons-Related Events/Mishaps. When an inadvertent release or an explosive mishap is reported, the following procedures will apply **(T-2)**:

5.9.3.1. In-flight:

5.9.3.1.1. When the involved aircraft returns to the de-arm or parking area, the aircraft will be impounded. **(T-2)** Limit maintenance actions to those required to make the aircraft safe.

5.9.3.1.2. The MOC, Munitions Control, Quality Assurance (QA) and Wing Safety will be notified of the impoundment action. **(T-2)**

5.9.3.1.3. The aircraft with unsafe munitions will be parked and isolated in an area approved by the weapons safety office and airfield management. **(T-2)**

5.9.3.1.4. Investigate and report the incident IAW AFI 91-204 and AFMAN 91-221, *Weapons Safety Investigations and Reports*.

5.9.3.2. Ground:

5.9.3.2.1. The senior ground crew member will be in charge of the aircraft or equipment until relieved and will ensure involved persons remain at the scene. **(T-2)**

5.9.3.2.2. Protect other aircraft or equipment located near the incident if an explosive hazard exists. **(T-2)**

5.9.3.2.3. Do not change the position of any switches except as needed for safety. **(T-2)**

5.9.3.2.4. Limit maintenance actions to those actions required to make the aircraft or equipment safe. **(T-2)**

5.9.3.3. Preserve mishap evidence to the maximum extent possible. **(T-2)** An example would be segregating an aircraft gun versus destroying it if it poses no immediate danger. This allows for evaluation of all the evidence and the ability to recreate the mishap conditions.

5.9.3.4. If an incident, malfunction, or mishap is suspected to have occurred or was caused by in-use, installed, or otherwise configured munition (live or inert), or a 20 or 30MM gun system jam creating a safety condition, notify the Global Ammunition Control Point (GACP) Air Force Life Cycle Management Center, Munition Division (AFLCMC/EBH) Munitions Rapid Response Team (MRRT): DSN: 777-4865; COMM: (801) 777-2666 and the MAJCOM munitions staff. **(T-2)**

5.9.3.4.1. Refer to AFI 91-202 for additional information about the MRRT team. **Note:** The MRRT team can also provide units technical assistance in resolving recurring 20 or 30MM gun system jams and malfunction isolation.

5.10. In Process Inspection (IPI). IPIs are inspections performed during the assembly or reassembly of systems, subsystems, or components with applicable technical data.

5.10.1. NSOs will determine if maintenance tasks require a locally directed IPI. If so, they will publish and forward an IPI listing to QA. The IPI listing will be reviewed every two years. **(T-2)**

5.10.2. QA will publish the IPI listing in the Evaluation and Inspection Plan. **(T-2)**

5.11. Forms. NSOs will use TO 34-1-3, *Inspection and Maintenance of Machinery and Shop Equipment*, and TO 00-20-1 to determine required forms along with form documentation

requirements. Additional requirements, above and beyond the TO, will be addressed in unit policy directives.

5.12. Dropped Object Prevention (DOP) Program. A dropped object is any aircraft part, component, surface, or other item lost during aircrew operations, unless intentionally jettisoned from engine start to engine shutdown.

5.12.1. HQ AFMC/A4M is the OPR for the AFMC DOP Program.

5.12.2. NSOs shall:

5.12.2.1. Appoint a DOP Program Manager and post their name in a prominent place within each applicable unit on a locally developed visual aid. **(T-2)**

5.12.2.2. Ensure the organization's DOP Program Manager provides an initial dropped object report via e-mail to HQ AFMC/A4M at AFMC/A4M.workflow@us.af.mil within 24 hours of occurrence. In addition, if it involves casualties, property damage, or if adverse publicity is likely, report IAW AFI 10-206, *Operational Reporting*. The local safety office shall be notified of all dropped objects within 24 hours of occurrence. The DOP report format listed in **Attachment 3** shall be followed. **(T-2)**

5.12.2.3. Ensure the organization DOP Program Manager provides a final dropped object report via e-mail to AFMC/A4M workflow within 10 duty days after the occurrence. Reports shall be maintained for a minimum of 24 months (may be electronic). The DOP report format listed in **Attachment 3** shall be followed. **(T-2)**

5.12.2.4. Develop and implement detailed guidance and procedures to include organizational responsibilities. **(T-2).** **Note:** Tenant units may follow a host base's DOP Program as long as the tenant unit's Local OI specifies the requirement to follow the host base's program. The tenant unit is still required to assign a DOP Program Manager to act as the unit's focal point for DOP related issues and must submit DOP Reports IAW the requirements outlined above.

5.12.2.5. Develop and implement a DOP training program. As a minimum, the DOP training program must address the following: **(T-2)**

5.12.2.5.1. Standardized training documentation requirements. **(T-2)**

5.12.2.5.2. Inspection, installation, removal, and repair procedures for aircraft panels, doors, access covers, cowlings, etc. Also, include training on the care of panel latches, fasteners, nut plates, and other locking devices. **(T-2)**

5.12.2.5.3. Initial DOP training. Supervisors shall ensure newcomers who are responsible for performing aircraft maintenance/servicing are trained on work center DOP awareness and prevention practices prior to starting work in their assigned work area. Ensure individuals who are assigned TDY, transferred, or loaned from other units receive work center DOP training prior to beginning work in their area. **(T-2)**

5.12.2.5.4. Annual DOP training. Supervisors shall ensure personnel receive annual DOP awareness and prevention training. **(T-2)**

5.12.2.6. Investigate dropped objects from transient aircraft and provide the home station DOP Program Manager with sufficient data to generate a report for trending and tracking purposes.

5.13. Scheduling. At a minimum, the affected NSOs will publish or reference specific scheduling policy guidance in the appropriate publication. (T-2)

5.14. Engine Borescope Training and Certification Program. NSOs will develop an OI on borescope training certification criteria, proficiency requirements, qualifications, and training documentation that meets the needs of the customer. (T-2)

5.14.1. Personnel assigned to perform borescope inspections of engine test articles will be trained prior to performing task. (T-2)

5.14.2. As a minimum, the training course(s) will include:

5.14.2.1. Care and handling of the equipment. (T-2)

5.14.2.2. All borescope/port locations to include all inspection requirements and procedures. (T-2)

5.14.2.3. All applicable technical data, fault isolation/damage assessment/defect size determination, and performance of an actual engine borescope. (T-2)

5.15. Engine Management.

5.15.1. NSOs shall:

5.15.1.1. Develop, implement, and maintain standardized engine management, Engine Trending and Diagnostics (ET&D), and Engine Health Management (EHM) policies and procedures IAW AFI 20-115, *Propulsion Management for Aerial Vehicles*, and TO 00-25-254-1, *Comprehensive Engine Management System Engine Configuration, Status and TCTO Reporting Procedures*, as identified in matrix. As a minimum, NSO Engine Management policy guidance will address the following: (T-2)

5.15.1.1.1. How to monitor accuracy and timeliness of reporting after all engine status changes and/or required action IAW TO 00-25-254-1.

5.15.1.1.2. Engine inventory control and management procedures. (T-2)

5.15.1.1.3. Responsibilities of affected work centers for accurate and timely Maintenance Information System (MIS) and Comprehensive Engine Management System (CEMS) reporting of Time Compliance Technical Order (TCTO), Special Inspection (SI), Time Change Item (TCI), and other documentation requirements (e.g., borescope inspections, blade blending, and CANN actions). (T-2)

5.15.1.1.4. Process to ensure engine, module, and component data is reported to Stock Record Account Number (SRAN) Engine Manager IAW TO 00-25-254-1 (e.g., part removal, installation, time update, and TCTO status change).

5.15.1.1.5. Process to ensure aircraft, engine records, MIS (N/A for AEDC) and CEMS database reconciliation occurs after maintenance actions are complete. (T-2)

5.15.1.1.6. Responsibilities and procedures for EHM and ET&D IAW AFI 20-115, not applicable to AEDC RDT&E engines. (T-1)

5.15.1.1.7. A CEMS and MIS contingency plan for when either or both systems are down for extended periods (more than 48 hours). The plan will include procedures for retaining data in date-time order for input when MIS/CEMS operation resumes. (T-2)

5.15.1.2. Coordinate Engine Management policy with the HQ AFMC/A4M Command Engine Manager prior to publication. **(T-2)**

5.15.1.3. Ensure units appoint a primary and alternate SRAN Engine Manager to monitor engine removals and replacements, component tracking, engine TCTOs and TCIs, engine records in the MIS, CEMS, and perform engine manager duties IAW AFI 20-115 and TO 00-25-254-1.

5.15.1.4. Ensure SRAN Engine Managers attend the AETC Engine Management Training Course to meet training required per TO 00-25-254-1.

5.15.1.4.1. SRAN Engine Managers located at Tinker AFB will be able to attend the Oklahoma City-Air Logistics Complex (OC-ALC) developed Depot Maintenance Engine Management Training Course in place of the Air Education and Training Command (AETC) course. The CEMS/Project Management Office (PMO) CEMS Training Course is a pre-requisite to attending the OC-ALC developed Depot Maintenance Engine Management Training Course. **(T-2)**

5.15.2. The SRAN Engine Manager will:

5.15.2.1. Act as the single POC between the unit and Command Engine Manager for SRAN Engine Management issues/concerns. **(T-2)**

5.15.2.2. Comply with AFI 20-115, TO 00-25-254-1 and all other applicable instructions and technical data.

5.15.2.3. Ensure all engine/module inspections/TCIs tracked by Engine Operating Time (EOT), Calculated Cycles (CCY), Total Accumulated Cycles (TAC), etc., are loaded/tracked in CEMS. **(T-2)**

5.15.2.4. Provide TCI information (cycles remaining, EOT, etc.) on serially controlled items to propulsion maintenance for engine and engine component cannibalization actions. **(T-2)**

5.15.2.5. Manage time changes on all engines and “life-limited and serially tracked” components. **(T-2)**

5.15.2.6. Ensure all engine SIs are loaded in MIS against the engine, not the aircraft/missile. **(T-2)**

5.15.2.7. Manage/monitor the unit ET&D and EHM programs when applicable. **(T-2)**

5.15.2.8. Perform duties and requirements for engine shipments, protection, and storage IAW AFPD 24-2, *Preparation and Movement of Air Force Materiel*, AFI 20-115, and TO 00-85-20, *Engine Shipping Instructions*, TO 2J-1-18, *Preparation for Shipment and Storage of Gas Turbine Engines*, and TO 2-1-18, *Aircraft Engine Operating Limits and Factors*.

5.15.2.9. Maintain a jacket file of engine shipping documents IAW AFI 33-322, *Records Management Program*.

5.15.2.10. Maintain and update historical documents for all assigned engines, modules, and major assemblies in the MIS IAW TO 00-20-1.

5.16. Ground Instructional Trainer Aircraft (GITA). This section applies to all AFMC units that utilize GITA/TAA. The MXG/CC or equivalent has overall responsibility for maintenance of assigned GITA/TAA and will ensure requirements of this section are implemented. Permanently assigned GITA are those aircraft that are not maintained in airworthy condition. Active GITA are maintained in system/subsystem operational condition for purposes of

maintenance training and normally carried in possession codes as outlined in AFI 21-103 or AFI 16-402. Inactive GITA are permanently grounded for use in personnel training. This section does not apply to ABDR training aircraft. ABDR training aircraft are managed by AFSC/LGPM (ABDR PO). This chapter does not apply to training equipment maintained by CLS contracts administered by commands other than AETC. (T-2).

5.16.1. Temporarily Grounded GITA (active). Temporarily grounded aircraft are subject to recall to the active fleet. (T-2).

5.16.1.1. Only those items requested by the PM are considered for removal. If the item does not affect training and if approved by MXG/CC, the part will be removed and turned in as per the MXG/CC's (or equivalent) instructions. (T-2).

5.16.1.2. Units are responsible for storing uninstalled or removed equipment that is not required for training. (T-2).

5.16.2. Permanently Grounded GITA (inactive). Permanently grounded aircraft are those declared excess to future operations or flying requirements by higher headquarters. Aircraft in this category will be re-designated by the addition of the prefix "G" to the basic MDS. (T-2).

5.16.2.1. Training Aid Aircraft (TAA) are considered Permanently Grounded GITA (inactive). Aircraft in this category, at a minimum, require an aircraft fuselage that was previously in the AF inventory as an aircraft. TAAs will be re-designated by the addition of the prefix "T" to the basic MDS. (T-2).

5.16.2.1.1. Assigned aircraft are not maintained in airworthy condition, and only the system/subsystem (e.g. doors, ramp, lights. etc.) required for the specific training requirements will be maintained in operational condition for purposes of required maintenance/organizational training. (T-2).

5.16.2.1.2. Aircraft used for maintenance training are not terminated from the AF inventory IAW AFI 16-402. TAA requests for use by non-maintenance AFSC require coordination through AFMC/LCMC and the PM.

5.16.2.1.3. Questions about the designation of an aircraft used for training should be directed to the MAJCOM AVDO at AFMC.A4M.Workflow@us.af.mil. (T-2).

5.16.2.2. Permanently grounded missiles retain their original MDS without a prefix, if applicable.

5.16.2.3. Upon assignment of a permanently grounded GITA/TAA, the MXG/CC or equivalent will e-mail HQ AFMC/A4M to coordinate "save list" requirements identified by the applicable PM. (T-2).

5.16.2.3.1. "Save list" items removed will be turned into LRS for shipment. (T-2).

5.16.2.3.2. If an item on the "save list" is not removed, the reason for not removing it will be annotated and coordinated with HQ AFMC/A4M. (T-2).

5.16.2.3.3. If items on the "save list" are required for training and an unserviceable item will suffice, units will coordinate with HQ AFMC/A4M for receipt of the unserviceable item(s). (T-2).

5.16.2.3.4. All unserviceable items furnished by ALC will be marked/identified as “unserviceable” in a conspicuous manner (e.g., Red X or Red dot system). **(T-2).**

5.16.3. MAJCOM Responsibilities. AFMC units are not required to use a MIS for permanently grounded GITA records management.

5.16.3.1. HQ AFMC/A4M will coordinate “save list” requirements/changes with the applicable PMs.

5.16.4. **MXG/CC Responsibilities. MXG/CC or equivalent will:**

5.16.4.1. Develop an installation publication or supplement to define the scope of training functions for GITA/TAA use, functional responsibility for funding, operations, maintenance, and records management. **(T-2).**

5.16.4.2. Ensure maintenance support of GITA/TAA used for training. Units that do not have organic maintenance capability will establish a Support Agreement (SA) or MOA assigning maintenance responsibility for GITA/TAA training use. **(T-2).**

5.16.4.2.1. GITA maintenance includes on- and off-equipment maintenance of active systems and subsystems and necessary actions to maintain the aircraft in a safe and presentable condition.

5.16.4.2.2. TAA requires minimal maintenance on systems/subsystems used to meet training requirements and should be maintained in a safe and presentable condition.

5.16.4.2.3. Determine which system and subsystem are required to support the training. Consider present, future, and cross-utilization of systems when making determinations. These systems will be maintained in the same configuration as operational equipment. **(T-2).**

5.16.4.2.4. Ensure explosive components are removed that are not required to support training requirements.

5.16.4.2.5. Place retained systems and subsystems not currently being used for training into extended storage IAW applicable technical data.

5.16.4.2.6. Ensure standard maintenance practices regarding inspection appearance, cleanliness, occupational safety, and prevention of corrosion are met. Corrosion control procedures are outlined in TO 1-1-691.

5.16.4.2.7. Develop and prepare inspection technical data check lists for use in inspecting the condition and safety of equipment before use and ensure inspections are performed.

5.16.4.2.7.1. Prior-to-use inspections will be conducted by the using organization employing a tailored weapon system pre-/post-dock checklist. **(T-2).**

5.16.4.2.7.2. Conduct periodic maintenance inspections using a tailored work deck. **(T-2).**

5.16.4.2.8. Prepare a separate memorandum for each GITA/TAA, addressed to the appropriate PM for the aircraft and inform them of the systems and subsystems that will be maintained in operational configuration. **(T-2).**

5.16.4.2.8.1. When changes in requirements occur, initiate a new memorandum.

5.16.4.2.8.2. Ensures copies of all GITA/TAA memorandums are forwarded to the MAJCOM AVDO at AFMC.A4M.Workflow@us.af.mil. (Subject: Attention MAJCOM AVDO) **(T-2).**

5.16.4.2.9. Air and space vehicle inventory will be reported IAW AFI 21-103 as required for ground trainers. **(T-1)**. Aircraft used for ground trainers are exempt from status and utilization reporting.

5.16.4.2.10. Maintenance actions will be documented IAW TO 00-20-1. **(T-2)**.

5.16.4.2.10.1. Owning units not having maintenance capability will establish MOAs or MOUs with organizations which can provide maintenance support. **(T-2)**.

5.16.4.2.10.2. The AFTO FORMS 781, 781A, 781F, 781H and 781K are mandatory for trainers in the 6930 Federal Stock Class (FSC). GP/CCs may opt the use of any 781 series forms with other FSC trainers.

5.16.4.2.10.3. The 711 HPW will deviate from normal maintenance documentation procedures on AFTO Form 781A due to the nature of maintenance being done on TAA no longer on PM's save list. Maintenance performed is for enhancing simulated aeromedical training and day-to-day upkeep.

5.16.4.2.10.4. When utilizing these forms, at a minimum, the documentation of the forms will be as follows: (T-2)

5.16.4.2.10.4.1. AFTO Form 781F. Blocks 6, 7, 8, and 9 will be filled in as applicable.

5.16.4.2.10.4.2. AFTO Form 781B. Fill out form IAW 00-20-1 para 5.8. if COMSEC equipment is installed; otherwise leave blank.

5.16.4.2.10.4.3. AFTO Form 781. Blocks 1, 2, 3, and 4 will be filled out as applicable.

5.16.4.2.10.4.4. AFTO Form 781H. Blocks 1, 2, 3, and 4 will be filled out as applicable.

5.16.4.2.10.4.5. AFTO Form 781A. Fill in *From*, *MDS*, and *Serial Number* blocks as applicable.

5.16.4.2.10.4.5.1. Print a thorough description of the discrepancy in the "DISCREPANCY" block. Fill in *Date Disc*, *Discovered By* blocks, and your contact number in *Employee No.* block.

5.16.4.2.10.4.5.2. When discrepancies are corrected, the *Date Corrected*, *Corrective Action*, and *Inspected By* blocks will be filled in.

5.16.4.2.10.4.5.3. Symbol Block 781A. The use of a Red X in the symbol block will be annotated when a discrepancy renders the equipment unserviceable or unsafe to use. Equipment written up in a Red X condition shall not be used until it is restored to a serviceable and safe condition.

5.16.4.2.10.4.6. AFTO Form 781K. Fill in *From*, *MDS*, and *Serial Number* as applicable. Document major inspections and delayed discrepancies on corresponding blocks if necessary.

5.16.4.2.11. Ensure timely completion of TCTOs on systems designated for configuration management and proper configuration status accounting is maintained.

5.16.4.2.11.1. Accomplish TCTOs on systems not designated for configuration management as required to ensure safety of operation or as directed by the PM.

5.16.4.2.11.2. TCTOs are not maintained on TAA.

5.16.4.2.12. Ensure proper coordination and documentation of parts removed from training aircraft are accomplished as follows:

5.16.4.2.12.1. When an item is removed or replaced, supervisors will ensure this action is documented in the aircraft forms. **(T-2)**. Include the authority for removal (e.g., message number, telecon, letters, and dates) and condition of installed/replacement items.

5.16.4.2.12.2. When the limited save list actions have been done, a copy of the completed list will be forwarded to the appropriate PM and the local documentation function which will be added to the TAA historical record. **(T-2)**.

5.16.4.2.12.3. For (Active) GITA only, W&B handbook requirements will be maintained IAW TO 1-1B-50 and applicable -5 series TOs.

5.16.4.2.12.4. Operating and maintenance technical data will be readily accessible whenever the GITA/TAA is in use or undergoing inspection.

5.16.4.2.12.5. MXG/CC will designate a GITA/TAA Manager as an additional duty. **(T-2)**.

5.16.4.2.12.5.1. The GITA/TAA Manager must be qualified to operate GITA/TAA systems and appropriate support equipment to conduct GITA/TAA maintenance. **(T-2)**.

5.16.4.2.12.5.2. The GITA/TAA Manager will accomplish and/or coordinate maintenance actions for the GITA/TAA and ensure GITA/TAA documentation is accurate and complete. **(T-2)**.

5.16.4.2.13. For equipment designated as trainers, only the systems required for technical training (or those required to ensure safety or system integrity) need to be maintained. **Note:** This does not apply to "temporarily" grounded aircraft, operational equipment, or systems on loan from MAJCOMs or ALCs.

5.16.5. Technical Data Applicability.

5.16.5.1. Operational systems on GITA/TAA are maintained IAW applicable technical data. The specific policy governing the use and modification of technical data is contained in TO 00-5-1.

5.16.5.1.1. Some systems may be operated and maintained with original contractor data because formal technical data was never developed and/or the contractor data was never assigned a TO number.

5.16.5.2. Inspection and lubrication requirements may be adjusted to correspond with training requirements and equipment usage and to prevent over or under inspection.

5.16.5.3. When significant savings may be achieved, the commander or contract project manager must request deviations or changes to technical data requirements, including substitution of materiel from the weapon system program manager.

5.16.5.3.1. If deviations are approved, the unit will retain approved deviations/changes in the GITA historical records. **(T-2)**. In all cases, safety or design function must not be compromised.

5.16.5.4. TCTOs. The QA function or other designated agency will be responsible for determining applicability of TCTOs for GITAs. **(T-2)**. TCTO upgrades are not required on TAA.

Chapter 6

QUALITY ASSURANCE

6.1. NSOs will establish QA office function and policy. At a minimum, the policy must: **(T-2)**

6.1.1. Address the roles and responsibilities of key personnel involved in the QA Program to include, as applicable, the CC, CV, Logistics Manager, site QA Superintendent, and site QA inspectors roles. **(T-2)**

6.1.1.1. The Hiring Authority must ensure civilian and/or military QA inspectors have the proper maintenance experience in the functional area/position to be filled. **(T-2)**

6.1.2. Develop a training plan to train all QA and QA augmentee personnel as required, identify the site QA inspector training, and Evaluator Personnel Evaluation (EPE) requirements. **(T-2)**

6.1.2.1. The following are minimum QA training requirements:

6.1.2.1.1. Core QA personnel will accomplish QA Training Course J6AZW2AXXX0Q1A (Quality Assurance Aircraft) https://aetc.adls.af.mil/kc/main/kc_frame.asp?blnWhatsNew=True. This Course is optional for augmentees and AFRL. Units may request for MAJCOM approval for equivalent courses. Send to AFMC.A4M.Workflow@us.af.mil. **(T-2)**

6.1.2.1.2. Complete an EPE within 60 days of job assignment, prior to performing QA evaluations, and subsequently every two years. AFRL is exempt from subsequent two year EPE requirement. Track EPE completion in QA database. **(T-2)**

6.1.3. Establish a Maintenance Standardization and Evaluation Program (MSEP)/Logistics Standardization and Evaluation Program (LSEP). NSOs will use **Attachment 4** scoring model for monthly/quarterly QA rating. **(T-2)** The MSEP must address:

6.1.3.1. Compliance with and currency of technical data. **(T-2)**

6.1.3.2. Equipment forms documentation. **(T-2)**

6.1.3.3. Equipment inspections and maintenance actions. **(T-2)**

6.1.3.4. Compliance and management of safety, environmental, and housekeeping programs. **(T-2)**

6.1.3.5. Programs established by this Addendum. **(T-2)**

6.1.3.6. Requirements for conducting PEs, Quality Verification Inspections (QVI), SI, Management Inspections (MI), EPE, Detected Safety Violation (DSV), TDV, and Unsatisfactory Condition Reports (UCR), if applicable. See **Attachment 4** for MSEP scoring model. Any variations to attachment 4 will be defined in local OI. **(T-2)**

6.1.3.7. A process to develop an Evaluation and Inspection (E&I) plan. The E&I plan must provide monthly E&I criteria to ensure leadership has a reasonable representation of the compliance status of their maintenance programs. **(T-2)**

6.1.3.7.1. The E&I plan identifies areas, types and number of inspections and evaluations to be conducted. It contains Routine Inspection List (RIL), the Key Task List (KTL), if applicable, and other pertinent evaluation and inspection information. **(T-2)**

6.1.3.7.1.1. RIL. A list of tasks that are subject to evaluation on a routine basis. QA will work in concert with the unit leadership (HNC - Branch Chief/Program Manager) to create the RIL and coordinate with maintenance related program managers for inputs/suggested changes to the list. (T-2)

6.1.3.7.1.2. KTL. A list that contains tasks that are complex, have been or have the potential to be problems, or high interest areas that require inspection. QA will work in concert with the unit leadership (HNC - Branch Chief/Program Manager) to create KTLs as applicable and coordinate with maintenance related program managers for inputs/suggested changes to the list. Review and update the list, at a minimum, every two years. (T-2)

6.1.3.8. A process to establish and adjust Acceptable Quality Levels (AQLs). (T-2)

6.1.3.8.1. An AQL denotes the maximum allowable number of minor deficiencies that a RIL task, process, or product may be assessed for the task to still be rated "Pass." (T-2)

6.1.3.8.2. Exceeding the established AQL results in a "Fail" rating. (T-2)

6.1.3.8.3. A major deficiency results in a "Fail" rating. (T-2)

6.1.3.8.4. The AQL is derived/revised from QA performance-based data. AQLs will be determined based on trends associated with the evaluation/inspection process. Adjustments to AQLs are reviewed, at a minimum, annually with the appropriate leadership before being adjusted accordingly. (T-2)

6.1.3.8.5. AQLs for work center tasks will be published in the E&I plan or the MSEP. (T-2)

6.1.3.9. A QA management information system (Command approved database) to maintain MSEP data. (T-2)

6.1.3.9.1. In the event summary data is maintained on classified networks, only the unclassified data will be used to create a summary. Data shall be processed through appropriate security channels prior to release. (T-2)

6.1.3.10. Establish a requirement for the QA office to publish a monthly/quarterly MSEP summary to advise appropriate senior leadership on the quality of the site logistics activities. (T-2).

6.1.4. QA Product Improvement Program (PIP). Establish a PIP, if applicable (i.e. DR and AFTO 22, *Technical Manual Change Recommendation and Reply*). (T-2)

6.2. AFMC Conventional Munitions Program. Munitions activities will follow Group/Squadron QA program. Small and unique units where a full QA program is not assigned/practical as identified in Table 6.1 with an asterisk must demonstrate how the requirements are met utilizing the CCIP and applicable mandated inspections/reviews listed in AFI 21-201, AFI 91-202, AFI 91-203 and AFMAN 91-201 (e.g. Quarterly/Semi-Annual/Annual/Bi-annual Safety inspection/reviews).

Table 6.1. AFMC Conventional Munitions QA Program Applicability Matrix.

AFMC Conventional Munitions QA Program Applicability Matrix	78 LRS/LGRW	649 MUNS	AFRL	96 TG	88 OSS/OSG	72 LRS/LGLOC	66 LRS/LGLC	AEDC/TSS-LG	ASD
Munitions Quality Specific Areas									
10. Accountability	X	X	X	X	*	*	*	*	*
11. Storage practices, security, and safety	X	X	X	X	*	*	*	*	*
12. Inspection	X	X	X	X	*	*	*	*	
13. Materiel handling and test equipment	X	X	X	X	*	*	*	*	*
14. Stockpile management	X	X	X	X	*	*	*	*	
15. Training programs	X	X	X	X	*	*	*	*	*
16. Infrastructure (LPS, grounds, and bonds)	X	X	X	X	*	*	*	*	*
17. TAS, CTIs, tools, and support equipment	X	X	X	X	*	*	*	*	*
18. Munitions assembly	X	X	X	X	*	*	*	*	
19. Tactical Munitions Reporting System (TMRS)	X	X							*

6.3. (Added) HQ AFMC/A4MM Command QA Functional Manager shall:

6.3.1. **(Added)** Oversee the AFMC MSEP, and serve as POC for AFMC QA functions.

6.3.2. **(Added)** Ensure development and review of Commanders Inspection Program (CCIP) Self-Assessment Communicators (SACs) IAW AFI 90-201 AFMC Sup.

6.3.3. **(Added)** Review results of HQ AFMC/IG inspections and unit MSEP reports for needed policy actions.

6.3.4. **(Added)** Approve unit QA databases.

6.3.5. **(Added)** Host and chair the Quality Assurance Working Group (QAWG).

6.3.5.1. **(Added)** QAWG members include Unit QA Chiefs/ reps. Additionally, HQ AFMC/IGL, HQ AFMC Majcom Functional Managers (MFMs)/Subject Matter Experts (SMEs), COR and designated union representatives may attend as required.

6.3.5.2. **(Added)** QAWG will conduct a face-to-face technical interchange meeting every 2 years (funding permitting) and participate in teleconferences at least bi-monthly.

Chapter 7

TECHNICAL DATA

7.1. The affected NSOs will: Ensure program specific technical data, i.e. Technical Instructions and Air Force Cryptographic Operation and Maintenance Manuals (AFKAM), to include Original Equipment Manufacturer (OEM)/Federal Aviation Administration (FAA) approved commercial instructions, that are created or used are managed as required by TO 00-5-1, *AF Technical Order System*, AFKAG-1, *Air Force COMSEC Publication*, *Air Force Communications Security (COMSEC) Operations*, and/or local guidance.

Chapter 8

MAINTENANCE INFORMATION SYSTEM (MIS)

8.1. NSOs will: Use MIS or Information Systems (IS) as directed by TOs/AFI or submit a deviation in the form of a waiver. If systems are not directed, NSOs will document systems used, system requirements and responsibilities in local instructions. **(T-2)**

8.1.1. HNC will use local MIS to schedule and document equipment inspections and maintenance actions. Specific use requirements will be addressed in local policy. **(T-2)**

Chapter 9

MAINTENANCE METRICS

9.1. Because of the differences between the mission areas: Specific guidance as to what will be produced and what forum to present it will be addressed in NSO policy directives. **(T-2)**

Chapter 10

SUPPLY SUPPORT

10.1. Units utilizing Shop Stock, Operating Stock or Work Order Residue: Will adhere to following guidance: **(T-2)**

10.1.1. Shop Stock. Includes gas cylinders, random length bar stock, sheet metal, plastic, fabric, electrical wire, and similar items not normally included in bench stocks. Maintain shop stock for day-to-day operations. Monitor shop stock to prevent materials from becoming excessive or outdated. Shop stock should not normally exceed 90 days usage, or the unit of issue or unit pack, whichever is greater; special consideration should be given for items no longer in production, not stock listed, or with long lead times. Shop stock can be stored near/adjacent to bench stock items, if practical, but do not mix them together. Clearly identify materials as —Shop Stock and label them with noun, national stock number or part number, unit of issue, and shelf-life, if applicable. **(T-2)**

10.1.2. Operating Stock. Includes connector dust covers, hydraulic line caps/plugs, and similar items that are normally recovered after use and re-used. Operating stock can be stored near/adjacent to bench stock items, if practical, but do not mix them together. Monitor operating stock to prevent it from becoming excessive or outdated. Retain partially used bench stock items in bench stock and not in operating stock. **(T-2)** Identify, tag, and turn in items with no forecasted use IAW AFI 23-101, *Air Force Materiel Management*, and AFMAN 23-122, *Materiel Management Procedures*; special consideration should be given for items no longer in production, not stock listed, or with long lead times. **(T-2)** Clearly identify items as —Operating Stock and label them with noun, national stock number or part number (if applicable), unit of issue, and shelf-life, if applicable. **(T-2)**

10.1.3. Work Order Residue. Includes expendable bit/piece items left over from maintenance work orders or bench stock deletions. Store work order residue near/adjacent to bench stock items, if practical, but do not mix them together. Ensure excesses are consolidated for turn-in to LRS at least annually; special consideration should be given for items no longer in production, not stock listed, or with long lead times. Clearly identify items as —Work Order Residue and label them with noun, national stock number or part number, unit of issue, and shelf-life, if applicable. Control all work order residues used on or around aircraft, uninstalled engines, and AGE. **(T-2)**

10.1.4. Units who maintain stocks that do not fit Shop, Operating Stock, or Work Order Residue requirements will develop policy to ensure management oversight, review and control of their stocks.

Chapter 11

CRASH DAMAGED OR DISABLED AIRCRAFT RECOVERY (CDDAR) PROGRAM

11.1. All host and tenant units with flying missions or active airfields/runways are required to: Maintain a CDDAR capability. The host unit is responsible for developing the CDDAR program, but execution of the program can be delegated to the tenant units as appropriate. **(T-2)**

11.2. Unit CDDAR programs include all elements of emergency/mishap response. Response to In-Flight Emergencies (IFE) will be included in the developing base/unit programs. **(T-2)**

11.2.1. Minimum response to IFEs consists of assembling a tow team, pre-positioning it for immediate response, and it remaining in place until the IFE is terminated or until the aircraft is towed back to the parking apron if required. Depending on the nature of the emergency, other technicians may be required to stand-by to provide immediate response capability as the situation warrants. **(T-2)**

11.3. Procedural guidance is located in: TO 00-80C-1, *Crashed, Damaged, Disabled Aircraft Recovery Manual*.

11.4. All CDDAR programs must: Be designed to provide response capability to and/or recovery capability of disabled or crashed aircraft in an expeditious manner consistent with the following consideration(s):

11.4.1. Requirement to open the runway for operational use. **(T-2)**

11.4.2. Prevention of secondary damage to the aircraft. **(T-2)**

11.4.3. Preservation of evidence for mishap or accident investigations IAW AFI 91-202 and AFI 91-204.

11.5. CDDAR Program Responsibilities.

11.5.1. The Host and tenant units Group/CC will:

11.5.1.1. Establish a CDDAR capability and a response capability to in-flight emergencies. **(T-2)**

11.5.1.2. Ensure sufficient equipment is available to include mobility/deployed operations, as authorized in the applicable Allowance Standard (AS). **(T-2)**

11.5.1.3. Approve selections for CDDAR team chief, rank waivers for team chiefs, and waivers for training. **(T-2)**

11.5.2. Base host unit CDDAR Responsibilities.

11.5.2.1. Each base host unit has overall responsibility for recovery of host/tenant/crashed/disabled aircraft. Base host units will: **(T-2)**

11.5.2.1.1. Provide recovery support for all tenant units as established in Host/Tenant Support Agreements (HTSA). **(T-2)**

11.5.2.1.2. Ensure CDDAR procedures are coordinated with the Fire Department, Safety, Civil Engineering (CE), Readiness, Explosive Ordnance Disposal, Security, Bioenvironmental

Engineering Element (BEE), Airfield Manager, and other on-/off-base agencies as applicable. **(T-2)**

11.5.2.1.3. Maintain capability to provide and support recovery operations for all base assigned aircraft, to include tenant aircraft. **(T-2)**

11.5.2.1.4. Develop support agreements to document requirements. **(T-2)**

11.5.2.1.5. Provide adequate weather proof storage for all recovery equipment. **(T-2)**

11.5.3. Tenant unit responsibilities.

11.5.3.1. Tenant units are responsible for the condition/repair of their aircraft. With regard to the CDDAR program, tenant units must: **(T-2)**

11.5.3.1.1. Coordinate with and participate in host CDDAR exercises, training and equipment inventories. **(T-2)**

11.5.3.1.2. Be actively involved to assist host base recovery operations during real world responses. **(T-2)** Tenant unit primary contributions are:

11.5.3.1.2.1. Technical expertise

11.5.3.1.2.2. Technical data

11.5.3.1.2.3. MDS-unique tools/special equipment

11.5.3.1.2.4. Airframe/system familiarization

11.5.3.1.2.5. Manpower/augmentation as needed

11.5.4. CDDAR Team Chief and alternate will:

11.5.4.1. Be a Senior Noncommissioned Officer (SNCO) or civilian equivalent (Group/CC may waive grade requirement to TSgt or civilian equivalent), approved by the Group/CC, and tracked on the SC documentation. When developing the maintenance instruction, consider special tasks such as identifying and handling of classified equipment, Aircrew Flight Equipment (AFE) or egress systems specific tasks, etc. **(T-2)**

11.5.4.2. Develop, in conjunction with the Maintenance Training Flight (MTF), course control documents for CDDAR initial and annual training. **(T-2)**

11.5.4.3. Review support agreements and base disaster response plans annually. Provide inputs for changes as required. **(T-2)**

11.5.4.4. Inform the Group/CC in writing of equipment shortages/serviceability that precludes effective CDDAR support. **(T-2)**

11.5.4.5. Ensure sufficient personnel/teams are trained to support CDDAR operations. This includes: **(T-2)**

11.5.4.5.1. Basic equipment operation. **(T-2)**

11.5.4.5.2. Familiarization with/training on any unique characteristics, hazards, materials for assigned aircraft (e.g., F-16 and U-2 hydrazine systems, C-130 ballast depleted uranium, aircraft composite materials, etc.) and document training. **(T-2)**

11.5.4.5.3. Availability and proper use of Personal Protective Equipment (PPE) as determined by technical data and the base BEE. (T-2)

11.5.4.6. Ensure special qualifications for personnel are identified and documented. Identify individual team member qualifications for specific equipment operations (e.g., towing, jacking, support equipment, special purpose vehicle). (T-2)

11.5.4.7. Maintain a list of all CDDAR tools and equipment. (T-2)

11.5.4.8. Ensure tools and SE are adequate for recovery (i.e., bags, slings, manifolds, tow bars, dunnage/shoring, etc.), and are serviceable and available. (T-2)

11.5.4.9. Conduct/participate in annual training exercises. Coordinate with the Emergency Management Office before exercises. (T-2)

11.5.4.10. Coordinate with unit QA Weight and Balance (W&B) manager when weight and Center of Gravity (CG) conditions are unknown. (T-2)

11.6. Recovery Team Qualifications:

11.6.1. All team members must be qualified in basic CDDAR operations (except augmentees). (T-2)

11.6.2. All qualifications are recorded in Career Field Education and Training Plan (CFETP), AF 797, *Job Qualification Standard Continuation/Command JQS*, or MIS, as applicable. (T-2)

11.7. Training Requirements.

11.7.1. All recovery team members must receive initial training comprised of both academic and hands-on training/exercises and will include actual lifting of an aircraft. This training will be developed and provided through an AETC formal training course. The ANG training course is available for use by all AF personnel. Personnel used to augment real-world recoveries do not require CDDAR specific training. (T-2)

11.7.1.1. Personnel previously qualified and actively serving in a CDDAR capacity are exempt from attending the AETC CDDAR training course. Units are encouraged to schedule these personnel for this training as workload permits.

11.7.1.2. Personnel previously qualified as CDDAR team members who are being returned/reassigned to these responsibilities must complete unit academic and hands on training (does not include actual lift) within 6 months of being assigned. (T-2)

11.7.1.3. All newly assigned CDDAR team members must complete this requirement within 6 months of being assigned CDDAR responsibilities. (T-2)

11.7.1.4. Group/CC may waive the training requirement in emergency situations. However, if training is available, units must make every effort to schedule personnel consistent with this requirement. Team Chief and alternate Team Chief initial training, to include actual lifting of an aircraft, cannot be waived.

11.7.2. All recovery team members must receive annual training comprised of both academic and hands-on training/exercises. Hands-on training includes aircraft lifting exercises using a unit owned aircraft or Ground Instructional Training Aircraft (GITA), do not use operational aircraft for actual aircraft lifts in a training environment. If units have no available training assets, consider participating with other organizations possessing training assets. If no suitable assets are

available for these exercises, units demonstrate capability by completing all steps but stopping short of actually lifting an operational aircraft. Ensure all training is documented. (T-2)

11.7.3. CDDAR team chiefs must complete an actual aircraft lift every three years. This can be accomplished through real-world events, the AETC formal training course, ANG training course, or locally using a GITA. (T-2)

11.7.4. Group/CC may waive training requirements as circumstances dictate. Waivers must not be used in lieu of training if training is available. Units must make every effort to schedule personnel consistent with this requirement.

11.8. Vehicle/Equipment Requirements.

11.8.1. The Group/CC determines unit vehicle/equipment requirements, within the limits provided by AS(s). (T-2) Units must identify vehicles and recovery SE in a local directive to ensure 24-hour availability. (T-2)

11.8.2. At a minimum, units possessing a CDDAR capability must possess sufficient aircraft lifting equipment to accomplish a complete lift of the assigned MDS aircraft at that base. This can be achieved by any combination of lift bags, aircraft jacks, or aircraft slings. It is not necessary to maintain sufficient lift bags to lift an entire aircraft using only lift bags unless otherwise directed by aircraft technical order. (T-2)

11.8.3. Vehicle/SE must be available. This does not mean that the vehicle/equipment must be dedicated to only CDDAR and sitting on standby. Requirements should include:

11.8.3.1. Radio-equipped general purpose truck.

11.8.3.2. Suitable trailer and tow vehicle (for storage and transportation of recovery equipment).

11.8.3.3. All terrain forklift.

11.8.3.4. Bulldozer.

11.8.3.5. Aircraft tow vehicle.

11.8.3.6. Crane (e.g., 20-ton, 50-ton, as applicable).

11.8.3.7. 40 ft. flatbed semi-trailer and tractor.

11.8.3.8. Light carts.

11.8.3.9. Tow bars.

11.8.3.10. Air bags.

11.8.3.11. Slings, belly bands, snatch cables, chains, etc.

11.8.3.12. Aircraft jacks.

11.8.3.13. Dunnage/shoring.

11.8.4. When base vehicle organizations are unable to support heavy equipment requirements, such as cranes and semi tractors and trailers, units will establish procedures to procure this support from local suppliers. Refer to AFI 24-302, *Vehicle Management*, for lease procedures.

11.9. Inspect for serviceability and inventory: All recovery equipment to include air bags, manifolds, jacks, slings, shoring, etc., before and after each exercise and use. Periodic equipment

inspections must be accomplished IAW intervals established in TOs or annually, if no TO intervals have been identified. Perform operational checks IAW applicable directives during exercises and/or inventory reviews. Document inspections and maintenance in MIS, on AFTO 244, *Industrial/Support Equipment Record*, or on MAJCOM approved form.

11.10. Environmental, Safety, and Health Hazards. The key for developing a safe and effective CDDAR program is communication and coordination. The CDDAR OPR must ensure the BEE is consulted and directly involved in determining personnel health hazards, training required and appropriate levels of PPE. **(T-2)**

11.10.1. There are two distinct phases of an aircraft mishap--initial response and recovery.

11.10.1.1. Initial response teams face the probability of an aircraft fire. Composite materials such as carbon fiber and Kevlar pose additional hazards; as the composite material burns, toxic gases, vapors and solid particles are released into the smoke plume.

11.10.1.2. Recovery team members may be exposed to fibers and respirable/inhalable dusts as composite aircraft parts are moved, modified by cutting, breaking, twisting, or hammering. Furthermore, even after a fire is extinguished, composite parts can smolder internally with no external indications; when disturbed, they can re-ignite and/or release toxic fumes. Personnel tasked to participate in crash or post-crash response, recovery, maintenance, and/or cleanup operations must be aware of/briefed on all possible health issues involved. Units must ensure local policies and procedures for handling crash damaged composites are addressed to include training and PPE. **Note:** For aircraft mishaps involving hydrazine (i.e. F-16 and U-2), only hydrazine trained response teams shall handle hydrazine material. PPE mandated in TO 00-25-172, TO 42B1-1-18, *General Procedures for Handling of H-70*, shall be worn at all times when working in situations where there is a potential for exposure.

Chapter 12

MODIFICATION MANAGEMENT

12.1. See AFI 63-131, Modification Management.

Chapter 13

EGRESS SECTION

13.1. The Egress Section maintains: Aircraft egress systems, components, and trainers (e.g., aircraft ejection seats, extraction and escape systems, egress components of jettisonable canopies, explosive components of escape hatches/doors); and stores egress explosive components that are removed to FOM during egress systems maintenance.

13.1.1. Facilities.

13.1.1.1. The installation commander will provide an enclosed shop facility, separated from other inhabited buildings or areas whenever possible, for off-equipment egress maintenance. **(T-2)**

13.1.1.2. Egress facilities will have limited access to ensure system integrity and will also be properly licensed for explosive component storage. Explosives are listed on an AF2047, *Explosive Facility License*, and maintained within the egress section. **(T-2)**

13.1.1.3. Facility must be large enough to accommodate the average number of egress components requiring maintenance and storage at any one time, see AFMAN 32-1084, *Facility Requirements*.

13.1.1.4. The egress section's licensed explosive facility will not exceed the licensed Net Explosive Weight (NEW) capacity for each Hazard Class Division (HC/D) without approval from the Wing Weapons Safety Office. See AFMAN 91-201 for additional restrictions.

13.1.1.5. Only egress section personnel will be authorized unescorted entrance to the egress licensed explosive location. **(T-2)**

13.1.1.6. All off equipment ejection seat maintenance will be accomplished in the egress section maintenance facility. **(T-2)**

13.1.2. Safety Requirements.

13.1.2.1. Personnel will strictly adhere to all safety requirements outlined in AFMAN 91-201, AFI 91-202, AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, and AFI 11-209, *Aerial Event Policy and Procedures*, and all 11A-, 11P-, 13A-series, and aircraft-specific technical orders.

13.1.2.2. The use of safety pins without an appropriate streamer properly attached is strictly forbidden. Only authorized flight safety pins will be installed on aircraft egress systems. Substitute safety devices are strictly prohibited. **(T-2)**

13.2. Classification Training.

13.2.1. Egress personnel will meet mandatory training requirements contained in AFI 36-2201, *Air Force Training Program* (or intra-service equivalent), AFI 91-202, AFI 91-203, this AFI, and the CFETP.

13.2.2. Civil service egress maintenance personnel who possess, as a minimum, one year of experience within the last three years performing egress intermediate- and organizational-level maintenance, repair, inspections, etc., may be considered for a waiver of classification training requirements. Waiver requests will be submitted to the applicable 2A6X3 MAJCOM functional

manager for review then forwarded to the 2A6X3 Career Field Manager for final approval/disapproval. If waiver is disapproved, individuals must complete classification training. (T-2)

13.2.3. Initial Certification of Egress Personnel.

13.2.3.1. Once classification training is complete, egress personnel must successfully complete an AETC egress technician course for the specific aircraft to be maintained. **EXCEPTION:** Advanced Concept Ejection Seat (ACES) II-trained and certified egress SSgt 5-levels and above being reassigned to another base or unit maintaining ACES II-equipped aircraft are not required to complete the Organizational Maintenance (O/M; on-equipment) egress technician course. Whether or not these individuals attend the O/M course is the decision of the Egress workcenter supervisor. (T-2)

13.2.3.2. Personnel are certified to perform egress systems maintenance by demonstrating adequate proficiency to a designated certifying official in the egress systems workcenter. Certification pass/fail criteria will be established by the egress workcenter supervisor. Document certification in accordance with AFI 36-2201. Retrain any individual who fails the practical evaluation until the individual demonstrates adequate proficiency or withdraw the individual from training. If egress personnel are withdrawn from training, retrain in accordance with AFI 36-2201.

13.2.4. Initial Certification of Non-Egress who augment egress technicians or perform Quality Assurance Evaluations of Egress Systems.

13.2.4.1. Non-egress personnel must successfully complete an AETC egress technician course for the specific aircraft to be maintained. **EXCEPTION:** AFE personnel do not have to complete the technician course unless they are to be employed as egress augmentees. (T-2)

13.2.4.2. After completing the AETC technician course, non-egress personnel will be initially certified in accordance with **section 13.2.3**. Non-egress personnel will also be recertified in accordance with **section 13.2.6 (T-2)**

13.2.4.3. Contracting Officer's Representative (COR) exclusively performing contract surveillance do not have to be certified. However, if these personnel are performing egress maintenance, they must be certified. (T-2)

13.2.4.4. All egress augmentees will complete Egress Explosive Safety training. (T-2)

13.2.5. Decertification.

13.2.5.1. Decertify any individual who fails to demonstrate adequate proficiency or who has a documented administrative action that could adversely affect job performance.

13.2.5.2. Decertify non-egress personnel who have not been recertified in the past 180 days. Decertify egress personnel after not having performed egress maintenance for more than 18 months. Instructing and inspecting egress maintenance is not considered performing maintenance. (T-2)

13.2.5.3. Document decertification in accordance with AFI 36-2201.

13.2.6. Recertification.

13.2.6.1. The purpose of recertification is to ensure personnel still maintain the required knowledge and skills to safely maintain and/or inspect egress systems. (T-2)

13.2.6.2. Recertify non-egress personnel at least every 180 days. (T-2)

13.2.6.3. Recertify egress personnel after not having performed egress maintenance for at least 18 months. (T-2)

13.2.6.4. COR personnel exclusively performing contract surveillance do not have to be recertified. If these personnel are performing egress maintenance, they must be recertified. (T-2)

13.2.6.5. Recertification procedures are identical to initial certification procedures and will be accomplished in accordance with **section 13.2.3** (T-2). Document recertification in accordance with AFI 36-2201.

Chapter 14

CONTRACT SURVEILLANCE

14.1. Training.

14.1.1. Units with assigned Contracting Officer's Representative (COR) personnel will be trained IAW AFFARS Mandatory Procedure (MP) 5301.602-2(d) and AFI 63-138, *Acquisition of Services*, as applicable.

14.1.1.1. CORs assigned to logistics services (Maintenance (aircraft/aerospace), Supply, Transportation, Fuels, etc.) will be knowledgeable of the tasks they surveil, the safety hazardous/requirements prescribed (fuels, munitions, egress, etc.), and will be trained on tasks requiring special certification prior to performing the surveillance. **(T-2)**. CORs are not required to be certified on specific tasks; rather, they are duty-position qualified to inspect, surveil, and observe according to the requirements in this instruction and other applicable directives.

14.1.2. COR management (e.g., Functional Commanders/Functional Directors (FCs/FDs), COR Supervisor) will be trained IAW MP5301.602-2(d) and AFI 63-138 as applicable.

14.1.3. If contract contains DFARS 252.228-7001 The Ground and Flight Risk Clause, see requirements in AFI 10-220.

14.2. Functional Commanders/Functional Directors (FCs/FDs) Roles and Responsibilities.

14.2.1. Ensure the development of a Quality Assurance Surveillance Program (QASP) that effectively measures and evaluates contractor performance throughout the life of the contract or management plan. The QASP is the document government personnel use to assess contractor performance. The QASP should be a "living" (i.e. increase or decrease surveillance intensity based on performance) document and reviewed as performance warrants but not to exceed one year. QASP development is mandatory for all AF units that fall under the purview of this instruction. QASP shall include procedures for the development, and coordination of monthly surveillance schedules to ensure contractor hours of operation are surveilled on a random basis to include all shifts, weekends, and holidays the contractor works. See Federal Acquisition Regulation (FAR) Part 46 and Defense Federal Acquisition Regulation Supplement (DFARS) subpart 246.4 for government contract QA.

Chapter 15

TRANSIENT AIRCRAFT (TA) “ALERT”

15.1. Sustain a TA “Alert” function if: Assigned; however, contracted TA processes/procedures may vary based on contract/PWS. **(Exception for 66 ABG:** Per Expeditionary Site Plan, Part 1 for Laurence G. Hanscom FLD (Hanscom AFB MA). Transient Alert services is provided through the Small Air Terminal Operations element assigned to the Logistics Readiness Squadron. Hanscom AFB does not have any dedicated aircraft maintenance shops. The only maintenance available is ground handling for transiting aircraft (e.g. park military/DoD aircraft, operates a tug to tow and maneuver aircraft as required; removes foreign objects and obstructions from taxiways; attaches ground wires, installs lock pins, and engine covers; and performs operator maintenance on vehicles and AGE). The following items will be accomplished:

15.1.1. The MXG/CC or equivalent will establish procedures and furnish necessary personnel and facilities for handling transient aerospace vehicles to ensure that servicing, inspection, and maintenance are consistent with the mission of each transient aerospace vehicles. **(T-2)** Special consideration should be given to medical or air evacuation aerospace vehicle, emergency missions, and special missions.

15.1.2. When issuing or renewing a TA contract, consider using the Standardized TA Services PWS authored by AFICA 771 ESS and the ACC Strategic Sourcing Cell.

15.2. Transient Aircraft (TA) Section. Recovers, services, inspects, maintains, and launches transient aircraft. Transient aircraft are those aircraft not assigned to a base that are en route from one location to another that may require routine servicing. Aircraft are not considered transient aircraft when deploying to or staging from a base for the purpose of flying sorties or conducting training with a squadron assigned to the base, with or without the necessary maintenance support from the home base. MOC coordinates specialist support for transient aircraft through appropriate squadrons. For off-station recovery procedures refer to owning MAJCOM instructions and command-to-command agreements. In addition to applicable guidance in this Addendum, TA will:

15.2.1. Recover and deliver all deceleration chutes for assigned, transient, and tenant aircraft to the AFE. **(T-2)**

15.2.2. Complete reimbursement documentation. **(T-2)**

15.2.2.1. AF Form 726, *Transient Aircraft Service Record*, may be used for documenting maintenance servicing requirements and necessary billing information.

15.2.3. Record arrivals and departures of transient aircraft on AF Form 861, *Base/Transient Job Control Number Register*, or locally-approved form if it captures all AF Form 861 fields. **(T-2)** TA Section NCOIC/Chief (or equivalent) will:

15.2.3.1. Assign each aircraft a single EID for all support general work performed by TA. **(T-3)**

15.2.3.2. Enter, as a minimum, “P” for park, “I” for inspect, “S” for service, “L” for launch, and “E” for EOR in the job description/remarks block. **(T-2)**

15.2.3.3. Forward completed AF Form 861 or electronic equivalent for contracted transient alert activities to the COR monthly. **(T-2)** The COR forwards completed forms to the applicable contracting officer managing the TA contract for inclusion in the contract file.

15.2.3.4. Route the AF Form 861 for non-contracted transient alert activities to the Maintenance Flight CC/Chief for review. **(T-2)**

15.2.3.4.1. After review, the TA Section NCOIC/Chief will file AF Form 861 for a minimum of 1 year. **(T-2)**

15.2.3.4.2. AF Form 861 may be used to validate manpower and equipment requirements against current AF standards.

15.2.4. Close out support general EIDs daily. **(T-2)**

15.2.4.1. Use the same last four digits on subsequent days for the same aircraft.

15.2.4.2. Use a separate EID for each discrepancy that is not support general.

15.2.5. Ensure that when a Functional Check Flight (FCF) is required on transient aircraft, QA at the transient base serves as the focal point and ensures all FCF requirements are completed. **(T-2)**

15.2.5.1. The TA Section NCOIC/Chief will coordinate all required FCF requirements through owning MXG/CC, off-station transient alert and off-station QA sections. **(T-2)**

15.2.5.2. If no off-station agencies exist, owning MXG/CC and owning OG/CC will issue guidance directly to the aircraft commander and off-station maintenance personnel. **(T-2)**

15.2.6. Supervise maintenance performed by assigned personnel on transient aircraft. **(T-2)**

15.2.7. Maintain the appropriate TOs for aircraft that can be expected to transit the function on a regular basis. **(T-2)**

15.2.8. Ensure personnel are trained and strictly adhere to oil sample requirements specified in the respective -6 TO.

15.2.9. Ensure personnel authorized to run engines are qualified and documented, and special certification documentation IAW this instruction. **(T-2)**

15.2.9.1. Request the aircrew to run engines if TA or maintenance personnel are not authorized.

15.2.9.2. If qualified aircrew members are not available, contact MOC to request assistance from the home station.

15.2.10. Ensure transient aircraft status changes are reported to MOC. **(T-2)** If support is required, the MOC notifies the home station for support.

15.2.11. Ensure End Of Runway (EOR) procedures for transient aircraft are developed IAW TO 00-20-1.

15.2.12. Ensure procedures exist for required weapons loading actions on TA, TA impulse cartridge tracking and storage, and weapons safing equipment requisition and maintenance for frequently transiting aircraft. **(T-2)**

15.2.12.1. Arming, de-arming and munitions unloading/loading operations on TA will be performed by a weapons load crew certified/qualified on the munitions and aircraft. **(T-2)**

15.2.12.2. The MXG/CC may direct the LSC to arm, de-arm, and unload an aircraft on which they are not certified/qualified, if appropriate technical data and support equipment is available.

15.2.12.2.1. In such cases, the aircrew shall be available for consultation on aircraft peculiarities. **(T-2)**

15.2.12.2.2. If these criteria cannot be met, request assistance from higher headquarters.

15.2.12.3. Chaff/Flare operations.

15.2.12.3.1. Under no circumstances will personnel attempt chaff/flare load operations without current technical data. **(T-2)**

15.2.12.3.2. If current technical data is available, then qualified personnel may perform chaff/flare load operations. **(T-2)**

15.2.12.3.3. If current technical data is available but no one is qualified on the TA type, then the MXG/CC (or AMS/CC at en route locations) may authorize the Weapons Task Qualification Crew (WTQC) or Weapons Task Qualification Manager (WTQM) to de-arm and/or unload the aircraft.

15.2.12.3.3.1. The WTQM will submit a written request to the MXG/CC (or AMS/CC at en route locations) identifying personnel selected to perform the task, aircraft type and (if applicable) number of aircraft to be de-armed and unloaded. **(T-2)**

15.2.12.3.3.1.1. Approved requests will be maintained for 90 days. **(T-2) Note:** This is a temporary, one-time authorization to facilitate required maintenance when qualified personnel are not available.

15.2.13. Ensure checklists exist to ask pilots about explosive egress systems pertaining to unfamiliar aircraft that do not normally transit their base. **(T-2)**

15.2.13.1. Aircrew members remove and install flight status safety pins on aircraft when transient maintenance personnel are not qualified.

15.2.13.1.1. The host GP/CC or his authorized representative may delegate this responsibility to the transient aircraft commander/pilot if the aerospace vehicle is a new or experimental aerospace vehicle with which base maintenance personnel are not familiar, or when personnel qualified to provide the required services accompany the aerospace vehicle. In such cases, the host unit will provide assistance within their capability. **(T-3)**

15.2.13.1.2. If TA cannot accomplish the required inspections, servicing, or repairs because of a lack of qualified personnel, facilities, or material (or there is no TA support available), and the TA commander does not wish to continue the flight without accomplishment of these items, the TA commander is responsible for requesting assistance through the appropriate external organizations.

15.3. Order transient aircraft parts IAW AFMAN 23-122 and TO 00-20-3.

15.4. Additional program references below, not all inclusive:

15.4.1. FOD see para 5.8.3.3.1. and 5.8.3.5.

15.4.2. DOP see para 5.12.2.6.

15.4.3. Impoundment see para 5.9.

15.4.4. Annual Transient Aircraft Landing Data see para 5.3.3.

15.4.5. Annual Inventory of AGE see para 5.3.2.

15.4.6. Special Certification Documentation see para 5.2.

DONALD E. KIRKLAND, Brigadier General, USAF
Director of Logistics, Civil Engineering
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING DOCUMENTS*****References***

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AFI 13-213, *Airfield Driving*, 01 Jun 2011

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AFI 20-115, *Propulsion Management for Aerial Vehicles*, 12 Feb 2014

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AFI 21-103, *Equipment inventory, Status and Utilization Reporting*, 26 Jan 2012

AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Management*, 23 Mar 2011

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AFI 21-201, *Munitions Management*, 3 Jun 2015

AFI 21-204, *Nuclear Weapons Maintenance*, 17 Dec 2015

AFI 23-101, *Air Force Materiel Management*, 29 Jan 2016

AFI 24-301, *Vehicle Operations*, 01 Nov 2008

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AFI 31-101, *Integrated Defense (FOUO)*, 8 Oct 2009

AFI 33-322, *Records Management Program*, 04 Jun 2012

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AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 Jun 2015

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 Jun 2012

AFI 91-204, *Safety Investigations and Reports*, 12 Feb 2014

AFMAN 23-122, *Materiel Management Procedures*, 08 Aug 2013

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AFMAN 33-363, *Management of Records*, 1 Mar 2008

AFMAN 91-201, *Explosives Safety Standards*, 12 Jan 2011

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AFPD 24-2, *Preparation and Movement of Air Force Materiel*, 27 Apr 2011

DOD 5100.76, *Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives*, 17 Apr 2012

AFFARS Mandatory Procedures (MP) 5301.602-2(d), *Designation, Assignment, and Responsibilities of a Contracting Officer's Representative (COR)*,

FAR Part 45, *Government Property*, 02 Apr 2012

TO 00-20-1, *Aerospace Equipment Maintenance Inspections, Documentation, Policy and Procedures*, 15 Oct 2015

TO 00-20-3, *Maintenance Processing of Reparable Property and The Repair Cycle Asset Control System*, 15 Aug 2015

TO 00-20-14, *Air Force Metrology and Calibration Program*, 30 Aug 2014

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 31 Dec 2015

TO 00-25-234, *General Shop Practice Requirements for the Repair, Maintenance, and Test of Electrical Equipment*, 23 Mar 2014

TO 00-25-254-1, *Comprehensive Engine Management System Engine Configuration, Status and TCTO Reporting Procedures*, 01 Nov 2015

TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*, 1 Aug 2015

TO 00-5-1, *AF Technical Order System*, 01 Oct 2014

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TO 00-85-20, *Engine Shipping Instructions*, 01 Aug 2015

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TO 2-1-18, *Aircraft Engine Operating Limits and Factors*, 01 Sep 2013

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TO 34-1-3, *Inspection and Maintenance of Machinery and Shop Equipment*, 12 Jun 2014

AFKAG-1, *Air Force COMSEC Publication, Air Force Communications Security (COMSEC) Operations*, 24 Mar 2004

Adopted Forms

AFTO 22, *Technical Manual Change Recommendation and Reply*

AFTO 244, *Industrial/Support Equipment Record*

AFTO 781A, *Maintenance Discrepancy and Work Document*

AF 797, *Job Qualification Standard Continuation/Command JQS*

AF 847, *Recommendation for Change of Publication*

AF 2047, *Explosives Facility License*

AFMC 40, *Foreign Object Damage Record*

AFMC 61, *Missing/Removed Tools and Equipment*

Abbreviations and Acronyms

ABG—Air Base Group

ABW—Air Base Wing

ACES—Advanced Concept Ejection Seat

ACO—Administrative Contracting Officer

AEDC—Arnold Engineering and Development Complex

AETC—Air Education and Training Command

AFE—Aircrew Flight Equipment

AFEMS—Air Force Equipment Management System

AFFARS—Air Force Federal Acquisition Regulation Supplement

AFKAM—Air Force Cryptographic Operational Maintenance Manuals

AFLCMC—Air Force Life Cycle Management Center

AFMETCAL—Air Force Metrology and Calibration Program

AFNWC—Air Force Nuclear Weapons Center

AFMC—Air Force Materiel Command

AFOSH—Air Force Occupational Safety and Health

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRL—Air Force Research Laboratory

AFSC—Air Force Specialty Code

AFSC—Air Force Sustainment Center

AFTC—Air Force Test Center

AGE—Aerospace Ground Equipment

ANG—Air National Guard Bureau
A&P—Airframe & Powerplant
AQL—Acceptable Quality Level
AS—Allowance Standard
BEE—Bioenvironmental Engineering Element
CANN—Cannibalization
CC—Commander
CCY—Calculated Cycles
CDDAR—Crash Damaged or Disabled Aircraft Recovery
CE—Civil Engineering
CEMS—Comprehensive Engine Management System
CFETP—Career Field Education and Training Plan
CG—Center of Gravity
CLS—Contracted Logistics Support
COMSEC—Communications Security
COR—Contracting Officer’s Representative
CTK—Composite Tool Kit
CV—Vice Commander
CWO—Combat Wing Organization
DFARS—Defense Federal Acquisition Regulation Supplement
DoD—Department of Defense
DOP—Dropped Object Prevention
DR—Deficiency Report
DRU—Direct Reporting Unit
DSV—Detected Safety Violation
EAID—Equipment Authorized Inventory Data
EHM—Engine Health Management
EID—Event Identification Description/Equipment Identification Designator
E&I—Evaluation and Inspection
EOT—Engine Operating Time
EPE—Evaluator Proficiency Evaluation
ESD—Electro-Static Discharge

ET&D—Engine Trending and Diagnostics
FAA—Federal Aviation Administration
FAR—Federal Acquisition Regulation
FC/FD—Functional Commander/Functional Director
FO—Foreign Object
FOD—Foreign Object Damage
GITA—Ground Instructional Training Aircraft
GP—Group
HC/D—Hazard Class Division
HNC—Cryptologic and Cyber Systems Division
HPO—High Performance Organization
HSC—Home Station Check
HTSA—Host/Tenant Support Agreements
IAW—In Accordance With
IFE—In-Flight Emergency
IPI—In Process Inspection
IS—Information Systems
ISO—Isochronal Inspection
ITK—Individual Tool Kit
IPMS—Information Processing Management System
KTL—Key Task List
LRS—Logistics Readiness Squadron
MDS—Mission Design Series
MEO—Most Efficient Organization
MI—Management Inspection
MIS—Maintenance Information Systems
MP—Mandatory Procedure
MSEP—Maintenance Standardization and Evaluation Program
MUNS—Munitions
MXG—Maintenance Group
MXS—Maintenance Squadron
NEW—Net Explosive Weight

NSO—Non Standard Organization
OEM—Original Equipment Manufacturer
OI—Operating Instruction
OK-ALC—Oklahoma City-Air Logistics Complex
OL-RAM—Operating Location-Ramstein
OM—Organizational Maintenance
OPR—Office of Primary Responsibility
PCO—Procuring Contracting Officer
PDM—Programmed Depot Maintenance
PE—Personnel Evaluations/Periodic Inspection
PH—Phase
PIP—Product Improvement Program
PMO—Program Management Office
POC—Point of Contact
PPE—Personal Protective Equipment
PWS—Performance Work Statement
QA—Quality Assurance
QASP—Quality Assurance Surveillance Program
QVI—Quality Verification Inspection
RIL—Routine Inspection List
RTV—Room Temperature Vulcanizing
SC—Special Certification
SDO—Services Designated Official
SE—Support Equipment
SI—Special Inspection
S/N—Serial Number
SNCO—Senior Noncommissioned Officer
SRAN—Stock Record Account Number
TA—Transient Alert/Aircraft
TAA—Training Aid Aircraft
TAC—Total Accumulated Cycles
TCI—Time Change Item

TCTO—Time Compliance Technical Order

TG—Test Group

TO—Technical Order

TDV—Technical Data Violation

TDY—Temporary Duty

TMDE—Test Measurement and Diagnostic Equipment

TMSM—Type, Make, Series, Modification

UCR—Unsatisfactory Condition Report

W&B—Weight & Balance

WUC—Work Unit Code

Terms

Allowance Standard—Authorized document that identifies the amount and type of equipment for an organization.

Composite Tool Kit—A controlled area or container used to store tools or equipment and maintain order, positive control, and ease of inventory. CTKs are assembled as a kit and designed to provide quick, easy visual inventory and accountability of all tools and equipment. CTKs may be in the form of a toolbox, a shadow board, shelves, system of drawers (Stanley Vidmar, Lista, etc.), cabinets, or other similar areas or containers. The CTK contains tools and equipment necessary to accomplish maintenance tasks, troubleshooting, and repair.

Crash Damaged or Disable Aircraft Recovery—The ability to move damaged or disabled aircraft using specialized equipment.

Equipment Identification Designator—A number assigned to a piece of shop equipment, used to track status and accountability.

Evaluator Proficiency Evaluations—An EPE is the direct evaluation of a Quality Assurance (QA) individual or any individual performing a quality/compliance assurance function in a unit.

Foreign Object Critical—FO critical areas are areas where aircraft or high speed test track maintenance, testing, and operations are performed (e.g., jet engine maintenance, fuel cell maintenance, major sub-assemble maintenance, and support equipment).

Impoundment—Isolation of an aircraft/equipment due to an unknown malfunction or condition making it unsafe.

In Process Inspection—Inspection performed during the assembly or reassembly of systems, subsystems, or components with applicable technical orders.

Maintenance Training—Any proficiency, qualification, or certification tasking required by a technician to perform duties in their primary AFSC.

Major Deficiency—A major finding is defined as a condition that would endanger personnel, jeopardize equipment or system reliability, impact safety of flight or warrant discontinuing the

process or equipment operation. Any Major discrepancy will result in an automatic inspection failure.

Minor Deficiency—A minor finding is defined as an unsatisfactory condition that requires repair or correction, but does not endanger personnel, impact safety of flight, jeopardize equipment reliability or warrant discontinuing a process or equipment operation. CAT II minors shall be documented for trends, but must not be counted against the AQL.

Mission Design Series—Alpha and numeric characters denoting primary mission and model of a military weapons system.

Off Equipment Maintenance—Maintenance tasks that are not or cannot be effectively accomplished on or at the weapon system or end-item of equipment, but require the removal of the component to a shop or facility for repair.

On Equipment Maintenance—Maintenance tasks that are or can be effectively performed on or at the weapon system or end-item of equipment.

Operating Stock—The bits and pieces needed to support a maintenance work center that does not meet the criteria of bench stock. It includes reusable items such as dust covers, hydraulic line covers, caps, items leftover from work orders, TCTOs, and items deleted from bench stock.

Organizational Level Maintenance—Maintenance consisting of those on-equipment tasks normally performed using the resources of an operating command at an operating location.

Personnel Evaluation—

(A PE is an over) **the**—shoulder evaluation of a PAC certified mechanic/ technician or team performing a maintenance task.

Personnel Protective Equipment—Equipment required to do a job or task in a safe manner.

Programmed Depot Maintenance—Inspection requiring skills, equipment, or facilities not normally possessed by operating locations.

Quality Assurance—QA serves as the primary technical advisory agency in the maintenance organization, assisting maintenance supervision at all levels to resolve quality problems. QA personnel are not an extension of the work force and shall not be tasked to perform production inspections.

Quality Verification Inspection—An assessment/evaluation of a maintenance procedure, process, product, or portion thereof, while it is being accomplished, or after it has been completed and the task/WCD stamped.

Save List items—Parts (bits, pieces, assemblies) that are reclaimed from a higher assembly at the direction of the item manager concerned.

Shop Stock—Includes items such as sheet metal, electrical wire, fabric, and metal stock, used and stored within a maintenance work center to facilitate maintenance.

Special Certification—Documentation - Management tool that provides supervisors a listing of personnel authorized to perform, evaluate, and inspect critical work.

Work Order Residue—Includes expendable bit/piece items left over from maintenance work orders or bench stock deletions.

Attachment 2

FOREIGN OBJECT DAMAGE (FOD) REPORT FORMAT

Figure A2.1. Foreign Object Damage (FOD) Report Format.

MEMORANDUM FOR	Date
FROM: <Unit Designation/Office Symbol> <Street> <Base and Zip Code>	
SUBJECT: <Foreign Object Report> . FOD program report number (unit, year, and month, followed by sequence number -- example, 301FW-F-060501).	
1. Type of report: Initial/Formal Update/Final FOD Report	
2. Date and Time of Incident:	
3. Unit and Base of Incident:	
4. Origin of Sortie:	
5. When discovered (Preflight, Postflight, In-Coming, Test Cell, etc)	
6. Owning Unit, Base and MAJCOM	
7. MDS and Tail Number (N/A for Test Cell incidents)	
8. Engine Type, Make, Series, Modification (TMSM)	
9. Engine Serial Number (S/N):	
10. Engine Position (If Applicable):	
11. Time Since Overhaul:	
12. Description of Incident:	
13. Material Failure: (Yes or No)	
14. Tech Data Deficiency: (Yes/No)	
15. Preventable/Non-Preventable:	
16. Investigation Findings:	
17. Action Taken to Prevent Recurrence:	
18. Parts Cost:	Labor Cost: Total Cost:
19. Additional Comments (if necessary):	
<Sign> FOD Monitor, <Unit Designation>	

Attachment 3

DROPPED OBJECT PROGRAM (DOP) REPORT FORMAT**Figure A3.1. Dropped Object Program (DOP) Report Format.**

MEMORANDUM FOR	Date
FROM: <Unit Designation/Office Symbol> <Street> <Base and Zip Code>	
SUBJECT: <Dropped Object Report> . DOP program report number (unit, year, and month, followed by sequence number -- example, 301FW-D-060501).	
1. DOP program report number (unit, year, and month, followed by sequence number -- example, 301FW-D-060501).	
2. MDS.	
3. Type mission and mission profile.	
4. Aircraft tail number.	
5. Owning organization and base.	
6. Origin of sortie.	
7. Date of incident and discovery location (if different than origin of sortie).	
8. Geographical location of object, if known.	
9. Item, noun, and description (use information from the applicable aircraft -4 series TOs).	
10. TO, figure, and index.	
11. Part number.	
12. Correct WUC (full five-digit) or Logistics/Maintenance Control Number (full seven-digit).	
13. Last PH, PE, PDM, HSC, or ISO inspection.	
14. Last maintenance performed in the area and date.	
15. Investigation findings (cause).	
16. Costs in dollars to repair or replace dropped object and any collateral aircraft damage as appropriate and cost in man-hours to repair.	
17. Actions to prevent recurrence.	
18. DR Control Number (if submitted).	
19. Unit POC information.	
20. Other pertinent information.	
<Sign> DOP Monitor, <Unit Designation>	

Attachment 4

UNIT MSEP GRADING

A4.1. Unit MSEP Grading. Units must grade their MSEP evaluations using objective ratings (Outstanding, Excellent, Satisfactory, Marginal, and Unsatisfactory). The unit MSEP shall publish a final report of findings, problem areas, and recommended improvements (as required), from the evaluation for distribution and/or briefing to unit Senior Leadership and inspected organizations at least quarterly.

A4.2. Inspections and evaluations performed (e. g., PE, SI, QVI) will be rated PASS/FAIL.

A4.2.1. Units will use the following five tier rating system:

A4.2.1.1. Outstanding 95-100%

A4.2.1.2. Excellent 90-94.99%

A4.2.1.3. Satisfactory 80-89.99%

A4.2.1.4. Marginal 70-79.99%

A4.2.1.5. Unsatisfactory 0-69.99%

A4.3. Ratings are calculated by: Dividing the total number of inspections passed by total completed. For example, QA inspects 10 inspections with the following results: 9 “passes” and 1 “failure.” Divide the total “passes” by the total inspections ($9/10=0.90$) 90 percent for an “Excellent” rating.

A4.3.1. Deduct 0.5 percentage points from overall percentage grade for each TDV, DSV, and UCR. For example, a squadron earns an overall rating of 90 percent, Excellent. However, QA observed 4 TDVs and 3 DSVs. Multiply the sum (7) by 0.5 and subtract the product (3.5) from the original 90 percent. The adjusted total is 86.5 percent; therefore, the squadron is rated Satisfactory.

A4.4. A cumulative Mx Group (or Squadron) score will be determined by: Dividing the Group’s total number of inspections and evaluations passed by the total inspections and evaluations completed. Deduct 0.5 percentage points for each TDV, DSV, and UCR from the overall percentage grade, using same formula in previous step.

AFMC AGE INVENTORY TEMPLATE

[illegible]

AFMC TRANSIENT AIRCRAFT (ALERT) COUNT TEMPLATE

[illegible]